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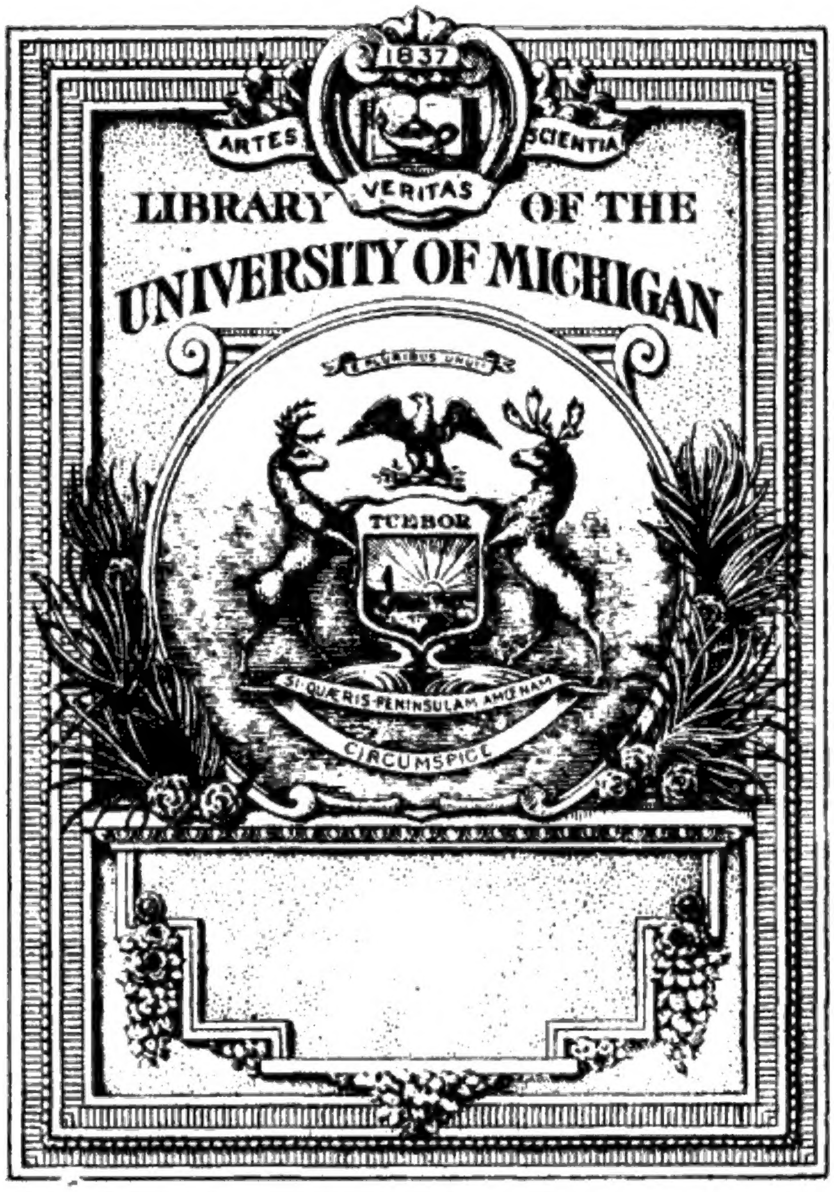
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MILITARY NOTES ON CUBA

1909

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INTRODUCTORY NOTE.

These military notes were compiled in the Military Information Division, Army of Cuban Pacification, during the occupation of Cuba in 1906, 1907, and 1908. The plan was formulated in said division and carried to completion under the supervision of the commanding generals of that army.

This compilation was prepared by Capt. John W. Furlong, General Staff Corps, who was in charge of the Military Information Division, Army of Cuban Pacification, February 19, 1907, to November 23, 1908.

The island of Cuba was divided into districts, to each of which an intelligence officer was assigned and almost all of the information herein contained was obtained by these officers. Some general information has been taken from the Military Notes on Cuba published in 1898, and from the Cuban Census of 1907.

The maps showing the division of the provinces into townships and the townships into barrios are not intended as indexes to the subject-matter following them, but are inserted for the purpose of showing the relative locations of townships and barrios. They were prepared from maps furnished by the Department of Government of the island of Cuba.

Figures of population are taken from the Cuban Census of 1907. A general table of contents shows the arrangement of the subject-matter. The book may be used in connection with the Military Map of Cuba, 1906–9, and Road Notes of Cuba compiled during the second intervention.

ERRATA.

Page 96: Line 34, for Orozco read Orosco.
Page 116: Line 4, for Oroszo read Orosco.
Page 116: Line 17, for Orozco read Orosco.
Page 190: Line 23, for San Augustín read San Agustín.
Page 690: Line 11, for Poma Roca read Poma Rosa.

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LIST OF SPANISH WORDS COMMONLY ENCOUNTERED IN MILITARY REPORTS PERTAINING TO CUBA.

Almacén	Warehouse.
Arroyo	Small stream; creek.
Asiento	The center of a hato, corral, or plantation.
Azotea	A walled and paved flat roof, which could be utilized for additional floor space by erecting temporary shelter.
Barracón	Buildings constructed on plantations to quarter laborers.
Barrio	Subdivision of a township.
Batey	The yard surrounding a sugar mill and usually inclosed by a fence or wall.
Bodega	A store selling provisions.
Bohío (Bogío)	A shack made of palm leaves.
Caballería	A tract of land 33⅓ acres.
Cacagual	Cocoa plantation.
Cafetal	Coffee plantation.
Caleta	Cove; a small bay or inlet.
Calle	Street.
Calzada	A first-class telford or macadam road.
Cantina	Store where liquor and provisions are sold.
Carretera	High road; pike.
Ceja	Small crescent-shaped piece of woods.
Central	A large sugar mill, grinding its own cane and that which is raised on adjoining colonias.
Cimarrón	A runaway slave.
Colonia	A farm devoted to growing of sugar cane.
Colonio	The owner or renter of a colonia.
Cordel	Twenty-four yards.
Corral	A plantation, round in shape, with radius of 1 league; usually devoted to cattle raising.
Cuartel	Barracks.
Embarcadero	A shipping point.
Encrucijada	Crossroad.
Estancia	A small farm devoted to raising garden products.
Estero	A small creek into which the tide flows.
Finca	Farm.
Guano	Dry palm leaves, used to roof shacks.

Hacienda	Plantation; also used as a term for landed property in general.
Hato	A grant of public land, circular in shape, with radius of 2 leagues; usually devoted to raising cattle.
Ingenio	Sugar mill grinding cane from its own lands.
Kilometer	Sixty-two hundredths of a mile.
Laguna	Lagoon.
Mangle	Mangrove.
Manglar	Ground covered with mangrove trees; usually swampy.
Manigua	Ground covered with small, thick growth. This name is also used in western Cuba for the country.
Merced	Name applied to a class of public land grants.
Mogote	An isolated, flat-topped hill.
Monte	In Cuba this term signifies woods or unpopulated territory with small growth. If the territory is extensive, it is called "monte firme." It is also synonymous with the country in eastern Cuba.
Paso	Name given to points along streams where there are frequently used fords.
Playa	A sandy beach.
Potrero	A cattle ranch or farm with land devoted to grazing.
Rancho	An isolated palm shack.
Realengo	Land not included in grants; property of the State.
Sabana	A flat table-land with but little vegetation.
Salto	Cascade.
Sao	Woods.
Seboruco	Sharp, porous rock.
Sitio	A small farm with few inhabitants or a very small village or community.
Tienda	Store.
Vega	Tobacco farm.
Zafra	The sugar crop. Also used to designate the season when the sugar crop is gathered—harvest.

CUBA IN GENERAL.

TABLE OF DISTANCES, IN MILES, BETWEEN TOWNS IN CUBA.

Bahía Honda.																															
838	Baracoa.																														
682	196	Bayamo.																													
174	664	508	Cardenas.																												
269	569	113	95	Cienfuegos.																											
742	147	60	498	473	Cobre.																										
201	637	481	45	68	541	Colón.																									
76	762	606	98	193	666	125	Guanabacoa.																								
105	730	577	69	164	637	96	29	Güines.																							
73	765	609	101	196	669	128	3	32	Havana.																						
683	152	48	442	417	102	485	610	581	543	Holguin.																					
99	739	583	75	170	643	102	21	16	26	587	Jaruco.																				
700	168	18	456	431	42	499	624	595	557	55	601	Jiguaní.																			
709	244	37	465	140	97	508	633	604	566	85	610	55	Manzanillo.																		
29	805	649	141	236	709	168	43	72	40	653	70	667	680	Mariel.																	
137	631	475	37	132	535	64	61	32	64	479	38	493	502	101	Matanzas.																
480	358	202	306	211	262	279	404	375	407	206	381	220	229	447	343	Nuevitas.															
71	879	723	215	310	786	242	117	115	114	727	140	741	750	155	178	521	Pinar del Rio														
418	420	254	244	149	324	217	26	313	345	268	319	282	291	385	281	62	459	Camagüey.													
285	553	397	111	65	457	84	209	180	212	401	186	415	424	252	148	195	326	333	Sagua la Grande												
52	786	630	121	217	690	107	24	37	29	634	47	648	657	19	85	428	99	366	233	San Antonio de los Baños.											
20	829	673	165	260	733	192	67	96	64	677	90	691	700	32	128	471	63	409	276	43	San Cristóbal.										
308	530	374	134	77	434	104	232	203	235	378	208	392	401	275	171	172	349	110	45	256	299	San Juan de los Remedios.									
108	730	574	66	161	661	93	32	12	35	578	12	592	601	75	29	372	149	310	147	56	99	200	Santa Catalina.								
282	556	400	108	45	487	81	206	177	209	404	183	418	427	249	135	198	323	124	32	230	273	32	174	Santa Clara.							
84	754	598	90	185	685	117	5	24	11	602	20	616	625	51	51	396	125	334	201	31	75	224	24	199	Santa Maria del Rosario.						
343	495	339	169	85	426	142	267	238	270	313	240	357	366	310	206	137	384	75	58	291	334	48	235	54	259	Sancti Spiritus.					
755	134	73	582	482	13	554	679	650	682	85	656	55	110	722	618	275	796	337	470	703	746	447	647	473	671	412	Santiago de Cuba.				
75	765	609	127	209	670	125	16	32	13	613	37	627	623	27	77	394	114	345	212	11	51	235	22	196	20	257	695	Santiago de Las Vegas.			
320	518	362	146	45	449	119	244	215	247	366	221	123	389	287	183	160	361	98	89	268	311	68	212	54	236	44	435	234	Trinidad.		
638	200	44	464	484	104	437	562	533	565	48	539	62	71	605	431	158	794	220	353	586	629	330	530	356	554	295	117	552	318	Tunas.	
73	765	609	101	196	669	128	3	32	0	593	26	557	566	40	64	407	114	345	212	29	64	235	35	209	11	270	682	13	247	565	Havana

THE ISLAND OF CUBA.

HISTORICAL SKETCH.

The island of Cuba was discovered October 28, 1492, by Christopher Columbus, who took possession of it in the name of Spain. The first attempt at a permanent settlement was made in 1511 by Don Diego Columbus, a son of Christopher Columbus, and Diego Velásquez, who landed at Baracoa with 300 men. The first settlement, at Santiago de Cuba, was made in 1514, and the following year a settlement was made at Trinidad.

The island was first called Juana, then Fernandina, and later Ave Maria. It received its present name from the natives of the island, whom Columbus described as a peaceful, contented, and progressive race. Havana was founded on its present site in 1519. It was totally destroyed in 1538 by French privateers, but was immediately rebuilt. The capital of the island was located at Santiago de Cuba until 1550, when it was moved to the city of Havana. The first governor of the island was Fernando de Soto, afterwards famous as an explorer. In 1554 the city of Havana was again destroyed by the French.

The early settlers devoted themselves principally to raising cattle, but in 1580 the cultivation of tobacco and sugar cane was commenced, and this led to the introduction of negro slavery.

During the seventeenth century the island was kept in a state of perpetual fear of invasions by the French, Dutch, English, and the pirates who infested the seas.

In 1762 the English, under Lord Albemarle, attacked the city of Havana, and on August 14, after a siege of two months, the city and island capitulated. By the treaty of Paris, February, 1763, Cuba was returned to Spain.

In 1790 Las Casas was appointed captain-general, and during his régime the island passed through an epoch of prosperity and advancement. He inaugurated a system of public improvements, built macadamized roads, laid out parks, erected many public buildings, and constructed fortifications, many of which are standing to-day.

In 1796 the Count of Santa Clara succeeded Las Casas, and he also took a great interest in the welfare of Cuba.

A royal decree was issued in 1825 giving the captain-general of Cuba absolute control, making him subject only to the reigning power of Spain. The consequence was that from that time until the United States occupation Cuba was ruled by a succession of autocrats, sent from the Peninsula, with no interest whatever in the welfare of the island or its people, save to raise a revenue for the crown greater than that of his predecessor, pay the expenses of his régime, enrich his own purse, and then return to Spain to be the envy of the grandees.

During the latter part of the eighteenth and the early part of the nineteenth century a number of insurrections and revolts were instituted, but were successfully put down by the Spaniards. The most important of these occurred in 1827–1829, when Cuban refugees in Mexico and the United States planned an invasion of Cuba. They organized throughout Mexico, the United States, and Colombia branches of a secret society known as the "Black Eagle." On account of the antislavery sentiment, which was beginning to show itself in these countries, the scheme proved a failure.

A more serious insurrection occurred in 1844, when the slaves on the sugar plantations, especially in the province of Matanzas, revolted. They were finally subdued, and over 1,300 persons convicted and punished.

President Polk made a proposition in 1848 for the purchase of the island by this Government for $100,000,000, but the proposition was withdrawn on account of the antislavery sentiment of the North and West.

In 1854 preparation was made in Cuba and the United States for another attempt at insurrection, but before the plans of the revolutionists were fully matured the leaders were betrayed, arrested, and executed.

During the next fourteen years the island enjoyed a period of comparative quiet and prosperity.

In 1868 a revolution broke out in Spain, and in October the natives of Cuba took up arms and declared their independence. During this period many of the nations of the Western hemisphere recognized the Cubans as belligerents. Spain did not succeed in putting down this rebellion until 1878.

About this time Spain was engaged in wars with Morocco, Chile, Mexico, Peru, and Cochin China, and for the purpose of keeping up these wars Cuba was called on to furnish the larger portion of the means. Revenues were raised, and the poor Cubans taxed to the utmost, each paying from $3 to $6 per capita. At one time the Cuban debt reached nearly a billion and a quarter of dollars, and for the last twenty years of Spanish rule the island paid an annual revenue to the Crown of from $25,000,000 to $40,000,000. It was during this war that the American ship *Virginius* was captured by the Spaniards, her cargo confiscated, and many of her passengers executed as revolutionists. This act nearly brought on a war between Spain and the United States.

In 1880 slavery was totally abolished in the island.

During the latter part of the year 1894 another revolution broke out on the island. At first the Spaniards considered it nothing more serious than a riot, but they soon found the revolution to be general throughout the island and backed by the most influential of its citizens. It was a down-trodden people fighting for independence.

On February 15, 1898, the U. S. battle ship *Maine* was blown up in the harbor of Havana.

So much sympathy had been shown by the citizens of this country for the Cubans and their cause that the administration soon took a decisive step in the matter. By an act of Congress, approved April 25, 1898, it was declared that war did exist, and had existed since April 21, 1898, between the United States and the Kingdom of Spain, whereupon the President, in a proclamation dated April 26, 1898, declared and proclaimed the existence of war. After an unprecedented campaign by the United States, Spain asked for terms of peace, and on August 12 an agreement was signed by representatives of the two countries for a suspension of hostilities, and a committee appointed from each country to arrange the terms of peace.

On August 12 a protocol provided for a cessation of hostilities and on December 10 a treaty of peace between the United States and Spain was signed at Paris.

It was ratified by the President February 6, 1899, and by the Queen Regent of Spain March 19, and proclaimed in Washington, D. C., April 11.

Cuba was at last to be free on the single condition that "she establish a stable government, capable of maintaining order and observing international obligations."

On Sunday, January 1, 1899, General Castellanos made formal surrender of Spanish sovereignty to the United States of America.

During the American occupation a military government had charge of the island until May 20, 1902, on which date it was relinquished to the Cubans.

In 1906 mutterings of discontent were heard following the elections. On August 19, 1906, they culminated in armed insurrection and after ineffectual efforts had been made by the United States Government to secure agreement of the conflicting parties, it became necessary to land marines to protect American interests. The President of the Republic resigned his position, and the Congress of Cuba having failed to act on the irrevocable resignation or to elect a successor, it became necessary for the United States to occupy the island by an armed force and to install a provisional government in the name of and by the authority of the President of the United States.

The provisional government was installed by proclamation on September 29, 1906, and this action was followed immediately by the dispatch from the United States of the Army of Cuban Pacification.

The proclamation was well received by both parties and the insurgent leaders agreed to the proposal to lay down their arms.

The American provisional government came to an end at noon on January 28, 1909, at which time the newly elected Cuban President took his seat.

SIZE AND SHAPE.

The island is long and narrow and its longitudinal trend is nearly easterly and westerly. It is 730 miles long and its width varies from about 25 miles to about 100 miles. Its area comprises about 44,000 square miles. In respect to these features and dimensions, as well as in other respects, there is a striking similarity between Cuba and Java.

Its shape is irregular, being somewhat like a half-moon, extending from east to west, its convex part facing north.

Its coast line is about 2,200 miles, or, including all indentations, nearly 7,000 miles.

LOCATION.

Cuba is included between the meridians 74° and 85° west longitude, and between the parallels 19° 40′ and 23° 33′ north latitude.

Havana, the capital of the island, is a trifle west of south of Key West and is distant about 100 miles, being separated from it by the Strait of Florida. East of Cuba lies Haiti, the second in size of the West India Islands, and south of it lies Jamaica. The first of these islands is only 54 miles distant from Cape Maisi, the easternmost point of Cuba. The latter is 85 miles distant from its southern coast. On the west coast Cuba is separated by Yucatan Channel, 130 miles wide, from the Peninsula of Yucatan, Mexico.

Thus from a military point of view Cuba occupies a strong strategic position.

A naval force located in Cuban waters controls the entrance to the Gulf of Mexico by the Strait of Florida, the Windward Passage to the Caribbean Sea between Cuba and Haiti, and the Yucatan Channel, connecting the Gulf of Mexico with the Caribbean Sea.

The first and last of these are the only entrances to the Gulf of Mexico, which is thus controlled completely.

In addition to the protection which a suitable naval force so located would be able to afford our southern coast, its presence would also, when the Panama Canal is completed, enable us to control not only the western Atlantic but also the eastern Pacific.

The island being situated midway between North and South America and being within easy sailing distance of the most important Atlantic ports of both Europe and America, as shown by the table of distances given below, makes it a good rendezvous for the mobilization of our naval forces, should it ever become necessary.

Table of distances from Havana.

	Miles.
Key West	100
New Orleans	690
Mobile	640
Tampa	350
Savannah	613
Charleston	662
Philadelphia	1, 137
New York	1, 215
Boston	1, 348
Quebec	2, 421
Vera Cruz	809
Rio de Janeiro	3, 536
Buenos Aires	4, 653
Montevideo	4, 553
Port of Spain	1, 521
Bermuda	1, 150
Gibraltar	4, 030
Plymouth (England)	3, 702

ADMINISTRATION.

Cuba as a colony of Spain was under a military government, having at its head a captain-general (ipso facto governor-general) at the time of the Spanish-American war.

The sovereignty of Spain ceased at noon, January 1, 1899, and from that time Cuba was under the military government of the United States until noon, May 20, 1902, at which time it was turned over to the Cuban Republic. The government of the Republic is representative, republican, and democratic. The sovereignty resides in the people. The supreme government is divided into three coordinate branches—the legislative, the executive, and the judicial.

Legislative.—The legislative power is vested in a Congress consisting of two chambers, the House of Representatives and the Senate. The House consists of 64 members (1 for every

25,000 inhabitants or fraction), elected for four years. The requisite qualifications to be a representative are—

First. To be a native-born or naturalized Cuban citizen who has resided for eight years in the Republic from and after the date of his naturalization.

Second. To have attained the age of 25 years.

Third. To be in full possession of all civil and political rights.

The Senate is composed of 4 Senators from each province, elected therefrom for a period of eight years by the provincial councilmen and by a double number of electors, who, together with the provincial councilmen, shall constitute an electoral board. One-half of the electors must be persons who pay the highest amount of taxes and the remainder shall possess the qualifications that may be determined by law. All of the electors must also be of age and residents of municipal districts of the province. The electors shall be chosen by the voters of the province one hundred days prior to the election of Senators.

One-half of the members of the Senate of the Republic are elected every four years.

To become a senator it is necessary—

First. To be a native-born Cuban.

Second. To have attained the age of 35 years.

Third. To be in full possession of all civil and political rights.

The salary of a senator and of a representative is $300 a month in United States currency.

Congress: The Congress of the Republic of Cuba has two ordinary sessions annually, one convening on the first Monday of April and the other on the first Monday of November. The duration of each session is at least 40 days.

Executive.—The executive power is vested in the President of the Republic. The President of the Republic must possess the following qualifications:

First. He must be a native-born or naturalized Cuban citizen and in the latter case must have served in the Cuban army in its wars of independence for at least ten years.

Second. He must have attained the age of 40 years.

Third. He must be in full possession of his civil and political rights.

The President of the Republic is elected by presidential electors, on one single day, as provided for by the law. The term of office is four years, and no person shall be President for three consecutive terms.

The President takes oath of office, or makes affirmation, before the supreme court of justice, upon taking office, faithfully to discharge the duties thereof, to comply with, and enforce the constitution and the laws.

The salary of the President of the Republic of Cuba is $25,000 a year in United States currency.

The executive power is assisted by a cabinet, consisting of six members, known as secretaries, viz, the Secretary of State and Justice; the Secretary of the Treasury; the Secretary of Government; the Secretary of Public Instruction; the Secretary of Agriculture, Industry, and Commerce; and the Secretary of Public Works. These secretaries are appointed by the President and they enjoy a salary of $6,000 a year in United States currency.

There is also a Vice-President of the Republic, elected in the same manner and for a like period of time as the President and conjointly with the latter. To become Vice-President, the same qualifications prescribed for President by the constitution are necessary. The salary of the Vice-President is $6,000.

Judicial.—The judicial power is exercised by a supreme court, six superior courts (one in each province), seven courts of the first instance (civil judges), six courts of instruction (criminal judges), twenty-six judges of the first instance and instruction who have both civil and criminal jurisdiction, six correctional courts (misdemeanors and light faults), and two hundred and eighteen municipal courts (cases of less than $200, dispossession of tenants, and other civil suits of small importance, and misdemeanors in towns where there are neither judges of instruction nor correction, nor registers of the civil state).

To be chief justice of the supreme court the following conditions are required:

First. To be a Cuban by birth.

Second. To have attained the age of 35 years.

Third. To be in full enjoyment of civil and political rights, and not to have been condemned to any "pena aflictiva" for ordinary offenses.

Fourth. To possess, in addition, any of the following qualifications: To have practiced in Cuba during ten years at least the profession of law, or discharged for a like period of time judicial duties, or occupied for the same number of years a chair of law in an official educational establishment.

Other persons may be also appointed to the positions of chief justice and justices of the supreme court, provided they possess the qualifications required by conditions 1, 2, and 3 above mentioned; viz, those persons who may have previously held positions in the judiciary of a similar or next inferior grade for the period that may be provided for by the law; those persons who, prior to the promulgation of the constitution of the Republic of Cuba, may have been justices of the supreme court of the island of Cuba. The time during which lawyers shall have exercised judicial functions shall be reckoned as that of the practice of law necessary to qualify them for appointment as justices of the supreme court.

The salary of the chief justice is $6,000 in United States currency; that of the president of the criminal court, $5,750; the fiscal, $5,750; the associate justices, $5,500 each.

TERRITORIAL, JUDICIAL, AND ADMINISTRATIVE DIVISIONS.

Territorial division.—The territory of the Republic is divided into six provinces, viz: Pinar del Río, Havana, Matanzas, Santa Clara, Camagüey, and Oriente. Each province has a governor and a provincial council, composed of eight members, elected by the people.

Judicial division.—Each province has an audiencia or superior court and is divided into judicial districts, each of which has a court of first instance. Pinar del Río is divided into 4 judicial districts; Havana into 8; Matanzas, 4; Santa Clara, 6; Camagüey, 2; and Oriente, 6. Each judicial district contains one or more municipalities, but the limits do not always correspond.

Administrative division.—For purposes of administration the provinces are divided into municipalities. These municipalities are administered by ayuntamientos, composed of councilmen elected by the people. In order to carry out the will of the ayuntamientos each municipality has an alcalde elected by the people. There are in the Republic 82 municipalities: Pinar del Río contains 12; Havana, 18; Matanzas, 10; Santa Clara, 21; Camagüey, 5; and Oriente, 16.

METHOD OF ADMINISTRATION.

Each province is divided into municipalities or municipal districts. The government of each municipality is vested in a municipal council and in a mayor.

These governments enjoy autonomy in so far as it operates to provide for purely local needs.

Municipalities are divided into three classes: First, those which have a population of more than 100,000 inhabitants; second, those which have a population of more than 20,000 inhabitants, but not more than 100,000; third, those which have a population of not more than 20,000 inhabitants.

Each municipal district must be comprised within a single province, and when any changes take place the judicial divisions will be harmonized with the administrative divisions. Each municipal district is divided into barrios of more or less the same number of inhabitants.

The municipal councilmen are elected by direct suffrage and the mayor is elected by direct election, in the manner and at the times prescribed by the electoral law. His term of office is four years. The number of councilmen in each municipality conforms to the following scale: Up to 1,500 inhabitants, 5 councilmen; from 1,501 to 3,000 inhabitants, 7 councilmen; 3,001 to 10,000 inhabitants, 9 councilmen; from 10,001 to 30,000 inhabitants, 15 councilmen; from 30,001 to 100,000 inhabitants, 21 councilmen; from 100,001 inhabitants upward, 27 councilmen.

When the municipal council deems it necessary, barrio mayors are appointed.

Municipal court judges are appointed by the Secretary of Justice in Havana to serve two years.

The names of three lawyers are sent to the Secretary of Justice by the judge of the court of first instance, from which the Secretary selects one man.

These judges serve without salary, but there are large fees connected with the office.

The court consists of a judge, secretary, and clerk.

The secretary and clerk receive salaries.

Fines imposed by the court revert to the municipal district for which it is appointed.

Cases tried by it can be appealed to the court of first instance, thence to the supreme court of the province, and from there to the supreme court in Havana.

OROGRAPHY.

The north coast is for the most part bluff and rocky, and in the provinces of Matanzas, Santa Clara, and Camagüey bordered by lines of islands and reefs of coral formation, the passages through which are extremely intricate and difficult. These islands are low, are in the main covered with mangrove forests, and contain few inhabitants.

The coast is low in the western part of the island, the bluffs ranging about 100 feet in height in Pinar del Río and rising gradually eastward. About Matanzas they reach 500 feet in altitude. In Santa Clara and Camagüey they are lower, but in Oriente the coast is abrupt and rugged, almost mountainous, rising in a succession of terraces.

The south coast from Cape Maisí to Cape Cruz is mountainous. Indeed, from Santiago westward to Cape Cruz the Sierra Maestra rises abruptly from the water to altitudes of several thousand feet. The shores of the gulf of Buena Esperanza, into which flows the Río Cauto, are low, and from this place westward, excepting a short stretch between Trinidad and Cienfuegos, the coast is low and marshy as far as Cape San Antonio, the westernmost point of the island. This coast strip of marsh is in the main narrow, but west of Cienfuegos it broadens into a great expanse, forming the Zapata swamp, an almost impenetrable region, 75 miles in length with a maximum breadth of fully 30 miles, clothed with the densest vegetation and teeming with tropical life.

Off the south coast are hundreds of low, marshy, mangrove-covered islands and islets.

Most of the harbors on both coasts are of peculiar shape, resembling nothing so much as pouches with narrow, often sinuous, entrances, opening within into broad expanses completely sheltered. This is the character of the harbors of

Havana, Santiago, Cienfuegos, Guantánamo, and many others less known.

In its relief the island of Cuba is not a simple orographic unit, but presents great variety and irregularity, which renders it incapable of simple description and generalization. The middle portion of the island, including the provinces of Havana, Mantanzas, Santa Clara, and Camagüey, presents little relief, but consists in the main of broad, undulating plains and shallow valleys, the land rising only in a few places to any considerable altitude. It is only at the two extremes of the island, in the province of Pinar del Río on the west and Oriente on the east, that the island presents any considerable or well defined relief features. Throughout Pinar del Río there runs a range of hills, a little north of the middle line of the province and closely paralleling in direction the northern coast. This range, which is fairly well defined, is known as the Cordillera de los Organos, or Organ Mountains, and rises in many places to altitudes exceeding 2,000 feet, culminating in Pan de Guajaibon, having an altitude of 2,500 feet. From the crest of this range the land descends northward and southward to the coast in long, undulating slopes, the southward slopes forming the celebrated tobacco lands known as Vuelta Abajo.

The central provinces of Cuba—Havana, Matanzas, Santa Clara, and Camagüey—consist mainly of broad, rolling plains, with shallow stream valleys. In Havana, Matanzas, and Santa Clara these plains are, or were prior to the revolution of 1895–1896, in a high state of cultivation, while in Camagüey they are, in the main, used for the grazing of cattle. The Valley of the Yumurí, in Mantanzas, is a type of the beautiful, highly cultivated region of this part of the island.

The Sierra de los Organos ceases as a range a little west of Havana, but traces of this uplift can be followed through the central part of Havana, Matanzas, Santa Clara, and the western part of Camagüey in the form of lines of hills of no great altitude, dotting these extended plains. They are seen south of the city of Havana in the little timbered hills known as the "Tetas de Managua," and farther east in the Arcas de Canasí, the Escaleras de Jaruco, and the Pan de Matanzas, just south of the city of Matanzas. This rises to an altitude of 1,300 feet and serves as a landmark to sailors far out in the Atlantic. In the eastern part of Matanzas Province these hills disappear, but they reappear again in Santa Clara, taking the form of elongated crest lines and flat-top summits, and as such extend into the western part of the province of Camagüey.

In the southern part of the province of Santa Clara is a group of rounded hills, occupying an area between Cienfuegos, Trinidad, and Sancti Spiritus. The highest of these, Potrerillo, has an altitude of 2,900 feet.

Among these hills are many beautiful valleys.

Oriente, at the other end of the island, is a province presenting great relief. Its surface is extremely broken with high, sharp mountain ranges, broad plateaus of considerable elevation, and deep valleys—some of them broad, others narrow and resembling canyons. The dominating orographic feature of the province, indeed of the whole island, is the Sierra Maestra, which, commencing at Cape Cruz, south of Manzanillo, extends eastward, closely paralleling the coast, from which it rises abruptly, as far east as the neighborhood of Santiago. In this part it contains many points exceeding 5,000 feet in altitude and culminates in Pico Turquino, which is reputed to have an altitude of 8,320 feet. From Santiago it extends to the east end of the island, but is much more broken and has more of a plateau-like form, with a great diminution in altitude. This portion of the range takes on a different name, being known as the Cobre Range. It contains numerous flat summits, approximating 3,000 feet in altitude, one of which, known as "La Gran Piedra," is said to have an altitude of 3,300 feet.

North of Sierra Maestra lies the broad and fertile valley of the Cauto, beyond which the country rises gradually to a high plateau occupying the interior of the province, with a summit elevation of 1,000 feet or more, on which stands the city of Holguín. The eastern part of the province consists of a maze of broken hills, with altitudes ranging from 1,000 to 2,000 feet, in which are many small and fertile valleys.

The Isle of Pines, with an area of 840 square miles, is a municipality of the province of Havana. It is, in effect, two islands, connected by a marsh; the northern being somewhat broken by hills, the southern, low, flat, and sandy.

HYDROGRAPHY.

On account of the peculiar shape of the island, being long and narrow, with the highlands in the interior, nearly all the rivers flow to the north or south, and, though numerous, are short, and few of them are of any importance for navigation. The largest stream is the Río Cauto, which heads in the interior of Oriente Province and in the north slopes of Sierra Maestra and flows westward through a broad valley to its mouth in the Gulf of Buena Esperanza after a course of about 150 miles. This stream is navigable for light-draft boats to Cauto Embarcadero, about 50 miles above its mouth.

The next stream of importance for navigation is the Sagua la Grande, on the north slope of the island in Santa Clara Province. This stream, which enters the sea near the city of Sagua la Grande, is navigable for some 20 miles above its mouth. Several other streams are navigable for a few miles above their mouths, but in most cases only through what may be regarded as estuaries. Taking the island as a whole, its internal communications, except along the coasts, are dependent almost entirely upon the few and poor wagon roads and its few railroads.

In the interior are many lakes and bayous, and while some of them are quite picturesque, they are of but little importance from a military point of view.

CLIMATE.

The climate of Cuba is comparatively simple and can be briefly described.

With the long, narrow shape of the island, its great extent of coast line and small breadth, it has in the main an insular climate, with a high mean temperature, slight extremes of temperature, great humidity of the atmosphere, and an ample rainfall.

At Havana, on the north coast, the mean annual temperature is 77°.

The range of temperature between the mean of the hottest month and that of the coldest month is from 82° to 71°, or only 11°. The highest temperature on record in Havana is 100.6°, and the lowest 49.6°.

This maximum recorded temperature is no higher than in northern cities of the United States, but the duration of high temperatures is much greater in Cuba and explains the high mean temperature.

Notwithstanding the long-continued high temperature, the climate of the northern portion of the island is tempered by the trade winds, which blow with but little variation throughout the year, and the nights in both winter and summer are cool.

The mean annual temperature at Havana fairly represents that of the island, it being perhaps a little hotter upon the south coast and inland than upon the north coast.

The range of temperature between summer and winter does not differ probably materially anywhere on the coast from that at Havana, but inland is probably a little greater.

The mean relative humidity at Havana averages about 75° and remains tolerably uniform at all times of the year. Inland the humidity becomes somewhat less, but not decidedly so.

The mean annual rainfall at Havana, derived from observations of many years, is 52 inches. The record shows, in different years, a rainfall ranging from 40 to 71 inches.

This represents quite closely the rainfall upon the north coast of the island. Inland and upon the south coast it is probably somewhat less.

As regards the distribution of rainfall through the year, there is a wet and dry season, the former being from May to October, during which time about two-thirds of the precipitation of the year is received.

Rain falls during about one-third of the days during each year, although this does not represent by any means the proportional amount of rainy weather. The days are usually clear up to about 10 o'clock, from which time till night during the rainy season it is frequently showery. The nights are commonly clear. Thunderstorms are frequent but not violent. The island is occasionally, though not frequently, visited by hurricanes. The maximum destruction occurs on the coast, as they rapidly lose their force and violence proceeding inland.

In winter, when the trade winds extend farthest to the southward, " northers " not infrequently occur, greatly and suddenly reducing the temperature on the north coast. These occur during the winter months and follow the severe storms of the United States. The temperature sometimes falls as low as 50°, causing much discomfort, and even suffering amongst the poorer people, as very little provision is made against cold in the construction of Cuban houses.

HYGIENIC RULES; DISEASES.

[From Circular No. 1, Headquarters Army of Cuban Pacification, Marianao, Havana, Cuba, October 16, 1906.]

The same hygienic rules which govern the conduct of men in temperate climates apply to tropical climates, but it is well known that intemperance and excess of all kinds are more dangerous in the latter, where, therefore, a stricter observance of those rules is necessary.

The best time of day for mental or physical work in the Tropics is the early morning. Heat and light often become excessive after 11 a. m. and until 4 p. m. Between those hours men not on duty should preferably remain in the shade and rest. If exposed to the sun, every care should be taken to keep the head cool, that is, properly covered, ventilated, and, if necessary, moistened.

As the sun goes down, there is a rapid radiation of heat and quick fall of temperature, often producing a distinct chill. The night temperature is always much cooler than that of day and care should be taken while in bed to avoid exposure of the body, especially of the abdomen, which is its most sensitive part. Such exposure, it must be remembered, renders one also much more liable to mosquito bites. Men prone to digestive or intestinal disorders would do well to wear a thin flannel abdominal band at night. It is generally useless during the day.

Exercise, either at work or sport, is useful in the Tropics as in all other countries, but it must be taken with discretion and moderation. The same output of physical energy is not possible in hot climates, except for a short time, and violent exercise or excessive work should be followed as soon as possible by adequate rest and recuperation.

The same amount of food is not required in the Tropics as in northern latitudes. Since one of the principal objects of food is to maintain the bodily temperature, the warmer the air the less is the loss of heat by conduction and radiation, and the less the amount required to be generated.

Furthermore, severe continued exercise being impossible. there is less wear and tear of tissues and less need of repair. It is also true that our digestive organs share in the general lowering of nervous energy and lose something of their power of dissolving and assimilating food. We may conclude, then, that the diet in Cuba should be moderate in quantity, but varied, of good quality, and well prepared. Recent scientific experiments have shown that Americans eat too much meat, that more than 10 ounces a day is seldom required to maintain the body in its best condition; that is, the condition which permits of most endurance to hardships and of longest resistance to fatigue and disease. * * * The advantage of a diet moderate in proteids has been illustrated in the late Russo-Japanese war, when both belligerents, whose ration of meat seldom exceeded half a pound, had the smallest mortality from disease on record, despite a series of strenuous campaigns.

Comparative statistics make it not at all improbable that the marked predisposition of American and English soldiers to typhoid fever is due to the large meat constituent of their ration. In the poor country districts of Cuba and the Philippines, where meat is seldom consumed, typhoid fever is practically unknown.

Fish is a good substitute for meat and can generally be easily procured, and of good quality in Cuba.

Excess of food is particularly dangerous in hot climates, where the kidneys are less active, the liver is more liable to congestion, the fermentation of the contents of the large intestine more likely, and the multiplication of bacteria more rapid.

On account of their general tendency to torpidity and the consequent possible accumulation of dangerous bacteria and their toxins, it is necessary that the bowels should be properly regulated. This should be done by suitable diet, if possible, rather than by medicine.

Tropical fruits are wholesome, and, if ripe, can be freely indulged in. Especially excellent are the aguacate, mango, banana, cocoanut, pineapple, star apple, sapote, etc.

The evils of intemperance in alcoholic drinks in the Tropics are too well known to need any notice here. But intemperance in water drinking calls for remark. On account of the greater perspiration of the skin, in hot countries, more water is required by the body, and a habit of drinking it every hour or two is easily contracted, especially while on the march or on fatigue duty. This is a pernicious habit, disturbing digestion and weakening the body, rendering it less resistant to fatigue. It is seldom necessary to drink more than once between meals. At mealtime, the thirst should be quenched before beginning to eat and only a moderate amount of water taken with the food itself. On a march, water should be drunk only during the rests; if not very long and made in the cool morning hours, it is much better to abstain until camp is reached.

The diseases of tropical climates are mostly preventable; that is to say, they can generally be avoided by self-control and the observance of proper sanitary rules. The diseases most to be apprehended in Cuba are malarial fever, yellow fever, and venereal diseases. Typhoid fever may also be expected, but not to any greater extent than in the United States. Dysentery is infrequent, and has none of the grave features of the type so common in the Philippines. Various kinds of intestinal parasites are present but not dangerous. Such especially tropical diseases as beriberi, leprosy, filariasis, elephantiasis, etc., need not be feared by North Americans.

Malarial fever, in its many forms, is the most prevalent disease in Cuba (especially the eastern part), and the one from which our troops suffered most during the first intervention. * * * We know that it is produced by the bite of mosquitoes, and probably in no other way; this knowledge puts the necessary weapons in our hands.

Yellow fever, formerly the scourge of Cuba, has been stamped out of the island as an epidemic or endemic disease, and it may be assumed that the ordinary vigilance of medical officers will suffice, if not to prevent an occasional sporadic case, certainly to prevent a serious outbreak among our troops. Yellow fever is, like malarial fever, produced by the bite of mosquitoes, and in no other way.

Mosquitoes, therefore, are the great enemy of American troops in Cuba, and an incessant warfare should be waged against them. But as their complete destruction is generally impracticable we must take every precaution against their bite. This is best accomplished by the use of wire screens on doors and windows and of mosquito bars over beds. * * * Any man who fails to use a mosquito bar carefully shows a criminal disregard of his health and that of his comrades, for should he be bitten and infected, he becomes the source from which other mosquitoes may become infected and disseminate the disease. A wholesome fear of the mosquito bite should be felt most where malarial fever is prevalent, but should never leave us, for it is well known that natives apparently in good health may carry malarial germs in their blood, which when transferred by the mosquito to a non-immune develops a severe form of fever.

Lastly, it should be remembered that a mosquito bar, if torn or not well tucked in, is often worse than none at all, since mosquitoes will get in and may be unable to escape.

There is among Cubans an intense dread of night air, to which they ascribe dangerous effects. They consequently tightly close the windows of their bedrooms, to the great detriment of their health. It is hardly necessary to say that this fear is not based on any rational ground; free and pure air, day and night, is necessary and beneficial in all climates. Doors and windows may safely be left open, provided they cause no chilling air current and they are screened against mosquitoes or the beds are protected by bars.

Venereal diseases are particularly infectious and virulent in tropical countries, as shown by the statistics of the Surgeon-General's office. Thus in 1900 the ratio of admissions per 1,000 of strength for troops in the United States, was 155.39, while for troops in Cuba it was 190.68, and in Porto Rico 367.88. For the year 1901 the ratio for the United States was 149.96 and for Cuba 187.28. In 1904 the ratio for the United States was 163.43 and for the Philippines 297.42. The prevention of these diseases should receive the careful consideration of commanding officers. A very efficacious measure, quite unobjectionable when properly conducted, is the examination of the men every week or every other week by a medical officer, all those found diseased being kept in hospital or simply debarred from pass and post-exchange privileges.

Typhoid fever is just as liable to spread in our military camps in Cuba as in the United States, but as it is relatively uncommon among Cubans, the sources of original infection will not be so numerous.

Typhoid fever and dysentery, as is well known, are caused by the ingestion, with food or drink, of the fecal matter (often in a powdery or almost invisible form) of a typhoid or dysenteric patient. Hence the importance of so disposing of the excreta that the danger of pollution be reduced to a minimum, either by burning them in crematories or by carrying them away by excavators after disinfection. Pit latrines are always a source of danger, but, in the absence of any better system, their use in temporary camps will often be necessary. In such case the greatest care should be taken to carry out the measures prescribed in the Field Service Regulations and the Manual for the Medical Department, in order to reduce the danger to a minimum.

Excreta from men and animals, as well as other dangerous organic substances, may find their way into the water supply; hence the accepted rule, from which it is never safe to depart, that any water open to suspicion should be sterilized by boiling or filtering. The porous jars, or ollas, found in all Cuban households, cool and clarify the water and may, to a slight extent, purify it if kept very clean, but can not be relied on to exclude any of the disease-bearing organisms.

Fecal matter may be carried by flies; hence the great importance of using every measure to prevent their breeding, to exclude them from latrines and prevent their access to kitchens and mess rooms by suitable screens. Flies are mostly bred in stable manure. Therefore stables should be as far from barracks as possible and the manure carried off, burned, or disinfected.

But of all carriers of infected matter in camp or garrison, man himself is the chief offender. It was ascertained that in the camp epidemics of typhoid fever in 1898 the disease was principally spread by direct contact from man to man or man to food; that is to say, that the germs were disseminated through the soiled clothing, infected shoes, and dirty hands of men visiting the latrines. Most important it is, then, in camps, especially where ordinary pit latrines are used, to enforce cleanly personal habits and to require men invariably to wash their hands before entering the mess room.

The most efficacious means to prevent the spread of an infectious disease is to recognize the first case and promptly isolate it. Whenever a man presents the first symptoms of fever it will often be impossible to tell whether it is malarial, yellow, or typhoid fever; such a case should be at once sent to the hospital to be kept under observation until its nature is determined.

In conclusion, it can be stated that, with care in his habits and diet, the northerner going to Cuba has, under ordinary and normal circumstances, fully as good chances of health and longevity as in temperate climates, but must resign himself to the loss of a certain amount of bodily and mental activity.

YELLOW FEVER.

During the first United States military occupation of Cuba the great object of sanitation for Cuba, and particularly for Havana, as far as the United States was concerned, was the eradication of yellow fever. Havana was looked upon as the particular point from which infection was spread. Yellow fever had been continuously present in this city since 1762. Every month in every year during the period from 1762 to 1899 there had been some cases in the city of Havana.

The city during the year 1900 was as clean and in as good sanitary condition as it was possible for labor to make it. By the beginning of 1901 it was apparent that ordinary sanitary measures were having no immediate effect on yellow fever.

In the summer of 1900 a commission of army medical officers, consisting of Maj. Walter Reed, surgeon, U. S. Army; James Carrol; Aristides Agramonte; and Jesse W. Lazear, contract surgeons, was organized in Cuba for the investigation and study of yellow fever. Due to the financial assistance given by the military governor they were able to experiment on the human subject. They took up the theory advanced by Dr. Carlos Finlay, of Havana, in the year 1880, that the stegomyia mosquito was the sole means of the transmission of yellow fever. During the experimentation Doctor Lazear fell a victim to the disease. The commission, through careful and elaborate experimentation, proved the theory to be correct, and came to the following general conclusions:

1. Fever is transmitted by the stegomyia mosquito.

2. The stegomyia becomes contaminated and acquires the faculty of transmitting the disease only after having bitten a yellow-fever patient within the first three days of his attack.

3. It is only when at least twelve days have passed since its contamination that it acquires the power of producing a well-marked attack of yellow fever.

4. Once having acquired this power it retains it probably until death.

5. The average life of the mosquito is from one to two months.

All ordinary sanitary measures during 1899 and 1900 had been failures so far as stamping out yellow fever was concerned. Yellow fever, at the beginning of 1901, was about as bad as it had ever been in Havana in the winter.

As soon as the conclusions of the commission were formulated in February, 1901, work was commenced along the line of extermination of the mosquito and pushed in every direction, with the result that on the 28th of September, 1901, the last case originating in Havana occurred. During the years 1902, 1903, and 1904 there were seven, eleven, and three cases, respectively (all imported).

From December, 1903, to September, 1904, no cases were reported. During the latter month the disease again made its appearance, but only three cases occurred up to the end of that year. Since that date, isolated cases have appeared from time to time and a slight epidemic occurred in Cienfuegos in September, 1907, but it may be confidently asserted that so long as proper sanitary measures are vigorously applied, absolutely no danger exists of an epidemic.

In such a city as Havana it is believed that the mosquitoes are bred within the house they trouble, and that the stegomyia generally breeds in the rain-water barrel and receptacle.

The stegomyia is very domestic in its habits and will not be likely to leave the premises in which it has taken up its quarters as long as the necessary conditions for the completion of its life cycle are favorable, viz, human blood, water in which it may lay its eggs, an agreeable atmosphere, and required temperature. In the absence of any of these requisites it will go to the nearest place where conditions are favorable. Having in view these facts the work of eradication takes three phases:

1. Prevent in every possible way the breeding of mosquitoes.

2. Prevent in every possible way the stegomyia from biting a yellow-fever patient.

3. Kill, as far as possible, all mosquitoes that have bitten yellow-fever patients.

The methods adopted should be as follows:

1. All water receptacles must be made mosquito proof and all cesspools and receptacles treated with a pint of crude oil every two weeks. All yards should be kept drained and as dry as possible.

2. Whenever a suspect of yellow fever is reported, which should be at once, screen at once the room or rooms in which the patient desires to be kept. Go over the other rooms in the house and tightly seal each one by pasting paper over the cracks and burn pyrethrum powder at the rate of 1 pound for every 1,000 cubic feet.

This makes very dense fumes and kills most of the mosquitoes, but as many only become intoxicated, open up the room at the end of two hours, sweep up all the mosquitoes and burn them.

All contiguous houses must be treated in the same manner.

When the case is ended, the rooms occupied by the patient are treated the same way.

The clothing is not disturbed, nor is any other disinfectant used.

Pyrethrum does not injure fabrics and leaves no odor. Sulphur may be used if there is nothing that can be injured or if nothing else is available.

INSECTS.

Scorpions, centipedes, and tarantulas are plentiful, and although they are poisonous their bites are rarely, if ever, fatal.

The chigoe or jigger and the common tick are also encountered. Unless carefully and entirely removed irritating sores are liable to result.

The wound due to extraction should be carefully washed, coal oil or some other germicide applied if practicable, and outside moisture excluded.

Mosquitoes and other very small annoying insects abound, especially in the vicinity of swamps. When campaigning, the only way relief can be obtained is to thoroughly grease all exposed portions of the body.

Flies speedily become numerous unless absolute cleanliness is preserved.

Picket lines and stables should be at least 150 yards from kitchens.

ANIMAL LIFÉ.

Throughout Cuba game is abundant; deer, though not native, have flourished and multiplied greatly. Rabbits are also plentiful. The wild boar (so called), the wild dog, and the wild cat are simply domestic animals run wild. They are quite numerous in all parts of the island.

Wild fowl, especially ducks and pigeons, abound, the former crossing from the Southern States during the winter season, while the latter remain on the island the year round.

Pheasants, quail, snipe, wild turkeys, and wild guinea fowl are also numerous, with several other varieties of game birds, such as the perdiz, tojosas, rabiches, and the guanaros.

The only distinctively native animal is the jutia or hutia, rat like in appearance, and black, which grows to a length of 16 or 18 inches, not including the tail. While eatable, it is not especially palatable.

Cuba has more than 200 species of native birds, including those mentioned as game birds, many possessing the most beautiful plumage, but those with song are rare.

In swampy localities crocodiles and American alligators (caimans) are found. They frequently grow to an enormous size, and the crocodiles give some trouble in the Zapata Swamp, where they seem to be quite numerous.

When camping on any of the islets of the swamp over night it is necessary to erect a stockade.

Few varieties of snakes exist in Cuba.

The majá, from 10 to 14 feet in length, is semidomesticated, if such a term may be used. Its favorite living place is in the palm-leaf thatches of older buildings and its favorite food is poultry.

Another snake, named the "juba," is more vicious in disposition than the majá, although never reaching more than one-third its size. It is not poisonous. The other varieties are still smaller in size, are seldom seen, and are not venomous.

The land crabs are very abundant and annoying.

The following table gives the registration of the number of animals in the island on June 30, 1908:

Province.	Horses.	Cattle.	Mules.	Total.
Pinar del Rio	38,755	231,601	9,679	290,035
Havana	76,417	344,755	15,794	436,966
Matanzas	66,724	377,098	5,440	449,262
Santa Clara	117,226	895,438	9,456	1,022,120
Camagüey	50,555	455,129	1,730	507,414
Oriente	128,020	479,347	14,289	621,656
Grand total	477,697	2,783,368	56,388	3,317,453

It is believed that the stock in Camagüey is not correctly reported. It is the best stock-growing province on the island, and in numbers it should rank with Santa Clara.

DISEASES OF THE HORSE.

There are practically no serious diseases of the horse in the island, with the exception of glanders.

There is a little of this disease scattered about, no locality being particularly infested with it.

The following are the common diseases existing and the best-known treatments therefor:

THRUSH.

This is an inflammation of the cleft of the frog, and may occur in any or all of the feet. It is caused generally by standing in mud or manure. The horse goes slightly lame. There is a slight but very foul-smelling discharge from the cleft of the frog.

Treatment: Keep the foot clean and dry. Trim out the frog so you can get at the bottom of the cleft. Apply pure tincture of iodine once daily. Dust in calomel and pack cleft with oakum or absorbent cotton. Change dressing daily.

Packing with powdered charcoal is also effective.

SCREW FLIES.

Screw flies are small white worms, larvæ, or "maggots" of a fly. The fly lays her eggs on or about wounds and the eggs will hatch in about four hours and begin to bore their way into the wound.

The part itches a little and there is a slightly bloody discharge from the wound. Screw flies also attack the penis and sheath of geldings without a preceding wound. Swelling of these parts and a slightly bloody discharge are the symptoms.

Treatment: Inject with a syringe into the wound or infected part a strong solution of creoline or similar product (use 1 part of creoline to 3 parts of water). In a few minutes the worms will begin to wiggle out.

Clean the parts thoroughly and after the worms are removed use 5 per cent solution of creoline (1 part creoline to 20 parts of water) once daily.

Chloroform injected will kill screw worms at once, but it is necessary to pick them out. Packing the wound with calomel will also kill them.

TETANUS OR LOCKJAW.

This is very common in Cuba, and wounds of all kinds on animals should be kept clean and treated with antiseptics to ward off the disease if possible.

Carbolic acid, 1 part mixed with 30 parts of water, or creoline in the same proportion, or corrosive sublimate 1 to 1,000 parts of water.

When a wound of the skin is received it should be properly cleansed and thoroughly disinfected, and if practicable left unbandaged or at most loosely protected. When a punctured wound of the foot is received the animal should immediately be taken to the blacksmith shop or other convenient place, the nail, if any, extracted, and the seat of the puncture carefully dished out with the shoeing knife until the sensitive tissues have been reached and a small quantity of blood caused to flow. This work should be done by the horseshoer or by some one who has a knowledge of the foot structure, and should not be left to the carelessness of those who may consider it sufficient to scrape the part out with a penknife or some other unsuitable instrument. The bottom of the puncture having been exposed, it should be diligently irrigated with pure carbolic acid, undiluted, and then loosely dressed with teased oakum saturated with equal parts of alcohol and carbolic acid. The hoof should then be covered with a piece of burlap retained in place by a bandage, care being taken not to interfere with the circulation. This dressing should be allowed to remain in place for three or four days, after which further dressing is unnecessary unless suppuration takes place, as new horn soon covers the thoroughly disinfected part.

It is true that many light cases of tetanus recover without treatment, and some in spite of it, but these are the ones not badly infected and where sufficient toxin is not present to cause very serious symptoms.

There is no recognized curative treatment for tetanus, therefore none is mentioned. It is, however, important that afflicted animals should have perfect quiet and freedom from noise.

Experience has taught us that tetanus may be eliminated if wounds are reported promptly and properly treated. The habit of permitting an animal which has picked up a nail and which shows no lameness until days afterwards, or one that has received a wound, to go without treatment is responsible for nearly every case of tetanus reported.

INFLAMMATION OF CORONET; SUPPURATIVE CELLULITIS; GANGRENOUS GREASE OR FOOT ROT.

(*a*) This is caused by a bacteria and occurs when horses are worked in mud. The inflammation starts at the top of the hoof (coronet). The hair sticks out and the part is hot and tender to the touch.

There is a slightly moist discharge from the skin and in most cases pus ("matter") forms and discharges from one or more places at the coronet.

Treatment: Clean the parts well and clip off any long hair. Apply a solution of corrosive sublimate (1 to 500), and if there is any suppuration or sore apply pure tincture of iodine once daily thoroughly for two or three days. After treating the part and it is dry, apply some grease, such as vaseline, wagon grease, bacon grease, or lard.

To prevent the disease, wash the horse's feet after working in the mud. Do not let the mud dry on. Keep the coronet greased.

(*b*) Characterization: As the name indicates, infectious suppurative cellulitis is an infectious disease common among cattle and sheep, but also attacking horses and mules. It is an extensive inflammation of the subcutaneous tissue of the lower extremities; if the morbid process extends beneath the hoof, causing it to slough, it is called "hoof rot." If the inflammatory process attacks the skin, it is called erysipelas. If it becomes circumscribed, resulting in local suppuration, an abscess or ulcer is the result.

Cause of the disease: The disease is brought in by animals coming from practice marches into the interior and camping on grounds or fields infected by cattle, or they may be infected by being transported on vessels formerly used for transportation of cattle coming from Central and South America. Bacteriological examinations of Pasteur have proven that the disease is caused by a streptococcus.

Course of the disease: Like all infectious diseases, suppurative cellulitis is a self-limited one; that is, if once an animal is affected, the disease will run its course and there is no way of checking it until its virulency is exhausted. As a rule, a number of animals which are subjected to the same conditions are attacked at the same time, resembling an epizootic. Usually but one foot is affected; sometimes, however, two or more.

Symptoms: A swelling of the lower part of the leg is usually the first symptom of the disease, and the disease and the swelling often extend to the knee or hock; there is considerable pain, the subcutaneous tissues become indurated, the skin is thickened and dry and usually cracks, followed by a discharge of thick, creamy pus. The swelling subsides and the leg is returned to its normal condition; in most cases it is accompanied by sloughing of the skin around the pastern. The course of the disease is from ten to fifteen days. The exceptions are largely in those cases where the inflammatory process extends to the coronary cushion, in which cases the disease is most serious, and mostly results in sloughing of the hoof and death from septicæmia.

Treatment: If the fetlock begins to swell, carefully clip the hair as high as the knee or hock and thoroughly wash the leg with warm water and castile soap; in order to hasten the inflammatory process, apply the so-called "Prietznitz poultice" (linen dipped in disinfecting solution or wet antiseptic gauze, covered by a flannel bandage). All dead pieces of skin or tissue should be carefully removed and the wound treated antiseptically; cauterized with lunar caustic when necessary and the wound from time to time swabbed with a mild solution of chloride of zinc; bandaging is in most cases indicated. If cellulitis has appeared around the coronary band, dispersal is favored by warm baths to which some antiseptic is added. The appearance of distinct fluctuation is the sign for immediately opening the abscess; considerable bleeding must be expected and almost always occurs. After the discharge of the pus, which is blood stained or decomposed, the cavity should be washed out with disinfectants and tampons inserted to check the bleeding. The tampons can be kept in position for twenty-four hours by a bandage, the pressure of which will assist its styptic effect, but care must be taken that the bandage is not applied so tightly as to cause necrosis. For a few days the cavity is syringed out and treated antiseptically, tampons and bandage. Precaution must be taken against retention of pus.

Prevention: The disease is due to a local infection of some kind, brought in by cattle from Central and South America. Where a herd of cattle or sheep have been pasturing there is danger of infection; also, on the steamers they have been transported on (cattle or sheep infected with that disease). The prevention of disease consists in clipping the fetlocks of all animals and then washing the fetlocks with castile soap and warm water. Wherever the sea is near enough give the animals a chance to get a daily foot bath, both infected as well as noninfected (of course only those which are able to walk without causing hemorrhages from the fetlocks).

(*c*) The so-called "foot rot" is what is known technically as dermatitis gangrenosa or gangrenous grease. It is characterized by moist gangrene of the skin and adjacent tissues of the phalanges of solipeds, which produces extensive sloughing; infection through slight wounds being doubtless a very important factor in the causation, obstructions to the circulation might be suspected, but were that the cause the necrosis would be confined to the part robbed of nutrition and the dead separated from the living tissue and no further invasion occur; but in this affection new areas are rapidly invaded until the entire foot is destroyed or the animal dies from septic intoxication.

The disease is sudden in its attack, often manifesting itself in the night, though its true character may remain obscure for two or even three days. The leg involved is swollen and extremely painful and resembles an acute attack of scratches. In the latter the soreness and swelling subside with exercise, while in the former it does not, but is aggravated and the debility of the patient is more marked. A careful examination will reveal a moisture of the skin in the affected part and by pressure a turbid serum, having the characteristic odor of gangrene, can be squeezed out; the surface of the necrotic spots will be cold and clammy, while surrounding parts may have a feeling of subnormal temperature. The necrotic patches are usually small, but may involve larger areas. If located at posterior part of fetlock it may extend across the region as a crack, like scratches, or it may extend up and down on either side of the flexor tendons from the coronet to the fetlock, involving the region immediately superior. The swelling may extend to the hock or knee, the animal becoming restless and showing extreme pain. The temperature is elevated, respiration hurried, the pulse increased, small and weak, and debility soon becomes well marked.

In about three or four days the necrotic patches are cast off as slimy patches. The disease may terminate here and the wound will fill with granulation, and recovery by cicatrization be complete in about two weeks, but this termination is exceptional, for, in most cases, new areas superficial and deep are invaded, sloughing extends, tendons, hoof, and ligaments are destroyed, and even the capsular ligament may be involved.

In most instances the system absorbs a sufficient amount of poison from the wound to produce a general septic condition that rapidly leads to death; the difference in the termination often noticed is probably due to the ability of the system to resist the poisons.

As the infection may take place through a very small wound, treatment by preventive measures is not likely to be successful. The disease being rapid in its progress, treatment should be energetic, and even heroic, and applied as early as possible. An antiseptic course locally and internally has been used, and often without success; the treatment with germicides, even to a degree of potential cautery, gave poor results.

Actual cautery (white-hot iron) is reported by some veterinarians as the one successful agent. It has been used vigorously when it seemed the entire foot was in an advanced stage of moist gangrene, even when sensation appeared to have been lost and treatment useless, and twenty-four hours later found the disease not only checked but every trace of gangrene gone, leaving only the resulting sore, requiring only the usual treatment for simple wounds.

After the destructive process has been arrested, cleanliness and antiseptics insure resolution. If the case be an aggravated one and debility be marked, stimulants are administered and the liberal use of hyposulphite of soda will assist in arresting the fermentation of the blood.

ITCH.

American horses turned out to pasture in Cuba are usually attacked by an irritating skin disease.

The skin of the legs, neck, and head are principally affected, and usually the disease appears within about forty-eight hours after the horse has been turned out.

There is intense itching, and the horse will rub or dig at the skin with his teeth until he rubs the skin off and frequently causes bleeding. Not all horses suffer from this disease, but others are very susceptible.

The disease seems due to bacteria or a vegetable parasite like a mold. It is not an animal parasite, and does not appear contagious.

The disease is not mange, nor is it the "dobe itch" of the Philippines.

Treatment: Keep the animal up and apply strong antiseptics. The best success has been obtained with a 1 to 500 solution of bichloride of mercury (corrosive sublimate) in water.

Apply thoroughly twice daily.

FORAGE.

The best forage grasses in Cuba are the guinea and parana, or "paral." The latter grows on rather moist soils.

The forage is much better from Havana east than west, as the principal grass about Havana and to the west is a wire grass, "espartillo." It is poor forage; animals do not like it, and it is not nourishing.

If other forage is not available the tops of sugar cane can be used to advantage. The classes of forage in order of excellence are: First, grasses, either guinea or parana; second, green-corn fodder; third, sugar-cane tops.

Three crops of corn may be gathered in one year, but as a rule only two are obtained, which are known as rainy-season corn and winter corn.

The green-corn fodder is excellent. The sugar-cane fodder is not very nourishing and is laxative. Most of the cane is grown east of Havana, in which section both cane and corn will be found scattered all over.

GEOLOGY.

The general geology of the island may be briefly stated as consisting of an older basement of pre-Tertiary sedimentary rocks in which Cretaceous and probably Jurassic fossils have been found. Above this there are, first, littoral beds composed of terrigenous material, and then a great thickness of white limestone, consisting of organically derived oceanic material as distinguished from true reef rock of late Eocene and Oligocene age. The island was reclaimed from the sea and assumed its present relief by a great mountain-making movement in the late Teritiary time, succeeding the deposition of the limestone. In late epochs, Pliocene and Pleistocene, the island underwent a series of epeirogenic subsidences and elevations which affected the costal borders, producing the wave-cut cliffs and a margin of elevated reef rock, which borders the coast in many places, as can be recognized in the cities of Havana and Baracoa. So far as its history is known, the island has never been connected with the American mainland, although such has frequently been asserted to be the case. These assertions have been based upon the erroneous identification of certain vertebrate animal remains. There are no traces in the animal life of Cuba, past or present, which justify this conclusion. Some of the crystalline rocks may be ancient, but most of them are mid-Tertiary in age.

A detailed report by the United States Geological Survey may be found in Volume I, Civil Report of the Military Governor of Cuba, 1901.

MINERAL RESOURCES.

The most important minerals of Cuba are iron, manganese, asphalt, and copper. The principal iron mines are in the vicinity of Santiago de Cuba. The Juraguá Iron Company's mines are situated at Firmeza, Oriente Province, about 18 miles by rail east of Santiago. The annual output of about 168,000 tons will be increased in the near future to 600,000 tons.

The mines of the Spanish-American Iron Company are at Daiquirí, 24 miles east of Santiago de Cuba. The annual output is about 450,000 tons. Some iron ore is reported from the mountains of Pinar del Río.

Asphalt is found in the provinces of Havana, Pinar del Río, and Santa Clara. The annual output is valued at about $122,900.

Manganese is found in considerable quantities in the province of Oriente. There is a mine at Ponupo, about 4 miles from La Maya, Oriente Province. The total annual output of manganese is valued at $164.000.

Copper is found in small quantities in nearly all the provinces, but the most important deposits are in Oriente Province. There are extensive mines at El Cobre, about 10 miles west of Santiago. The annual output is valued at about $13,000. The old shafts are reported flooded, and the ore produced comes from some high-grade ore in the portions of the mine above water level. If the property is pumped out and developed, the annual output will increase.

Several gold mines have been located in the provinces of Santa Clara and Oriente, but no gold is being produced. It is possible that valuable veins exist, but evidence is wanting for an unqualified statement that either placers or quartz mining will prove to be of economic importance in the island.

In Santa Clara a small quantity of naphtha is produced.

On the Isle of Pines, near Salinas Point, are deposits of salt. and near Nueva Gerona some good marble is produced.

FORESTRY.

Owing to the richness of the soil, the equable, moist temperature, and abundant rainfall, the island abounds in flowers, fruits, and a great variety of vegetables.

The luxuriance of jungle, grove, and forest is such that the country can be traversed only by the use of the machete or along well-worn pathways.

There are in the island 3,350 native plants, besides those introduced. They include many species of valuable wood, such as mahogany, ebony, granadilla, majagua, cedar, walnut, ceiba, lignum-vitæ, oak, pine, and the palm, of which there are over 30 species, among them the royal palm, which to the poor Cuban is the most valuable of all, as the leaves provide him with a roof and the trunk with walls for his dwelling place. In the interior the forests are in large part made up of Cuban pine, which makes an excellent lumber.

It is estimated that about 13,000,000 acres, or nearly half the area of the island, remain clad in original forests. These areas are found mainly in the eastern part of the island, in the provinces of Oriente and Camagüey.

Over a large part of the cleared or cultivated areas are luxuriant grasses, which, like the parana and guinea grasses, grow to a height of several feet, and are abundant and nutritious.

SOIL.

The land is, as a rule, very fertile, presenting four different classes, calcareous-ferruginous, alluvium, argillos, and silicious.

The lands most celebrated for their fertility are the districts of Sagua, Cienfugos, Trinidad, Matanzas, and Mariel. The Valley of Güines owes its reputation to artificial irrigation.

The color of the land varies, and, although this is not sufficient to judge the quality, it is usually classified as red and black, the former being subdivided into "polvillo" and "perdigon," according to the appearance and substance. The combination of red and black gives a land known as "mulata," which is suitable for all cultivation. The red land, which contains oxide of iron and a sufficient amount of clay and silica, produces an excellent vegetation and yields large crops of yucca, oranges, bananas, and tobacco. The black land is very thick and rich in organic matters and produces excellent bananas, sugar cane, coffee, and other products.

AGRICULTURAL PRODUCTS.

The principal agricultural products of Cuba are sugar cane, coffee, tobacco, cocoa, cotton, sarsaparilla, vanilla, copal, china root, cassia, Palma Christi mustard, pepper, ginger, licorice, balsam de Guatemala, India rubber, etc.

The following table shows the approximate areas, expressed in cordeles, of which there are 324 in a caballería, or approximately 10 to an acre, which are planted in each of the principal crops, together with the percentage of the cultivated area in each crop:

	Cordeles.	Per cent.
Sugar cane	4,142,016	47.3
Sweet potatoes	973,629	11.3
Tobacco	817,452	9.3
Bananas	753,627	8.6
Indian corn	639,042	7.3
Malangas	303,603	3.4
Yucca	283,363	3.2
Coffee	137,854	1.6
Cocoanuts	120,261	1.4
Cocoa	119,525	1.4
Rice	42,076	.5
Yams	30,030	.3
Irish potatoes	26,808	.3
Pineapples	26,782	.3
Oranges	23,418	.3
Onions	14,274	.2

The table shows that very nearly one-half of the cultivated area of Cuba is planted in sugar cane; that the next crop of importance, in which 11.3 per cent of the cultivated area is planted, is sweet potatoes; while tobacco, for which crop the island is quite as celebrated as for sugar cane, occupies about 9.3 per cent of the cultivated area, being third in importance as measured in area cultivated.

Coffee, at one time a product of great importance in Cuba, occupies only about 1.6 per cent of the cultivated area. Nearly one-half of this area is in Oriente.

In general it may be stated that crops which are cultivated mainly upon owned estates are those of a permanent character, such as sugar, cocoanuts, coffee, and cocoa, as distinguished from annual crops.

Sugar.—The percentage of cultivated land planted in sugar cane in each province is about as follows:

	Per cent.
Matanzas	78.4
Santa Clara	71.3
Camagüey	34.7
Oriente	34.5
Havana	27.0
Pinar del Río	6.1

Tobacco.—Of the total cultivated area of Cuba, about 9.6 per cent is planted in tobacco. The proportion of land so planted varies widely in the different provinces, as shown in the table below:

	Per cent.
Pinar del Río	42.4
Havana	10.3
Santa Clara	4.2
Oriente	.6
Camagüey	.3
Matanzas	.3

Considering tobacco relative to other agricultural products, it is most prominent at the western end of the island, in Pinar del Río primarily and in Havana secondarily. It is cultivated in all the other provinces, but to a very small extent.

These are the two great export crops of the island. The cultivation of sweet potatoes is distributed quite generally over the island, but is greatest in the two extreme provinces, Pinar del Río and Oriente.

The banana is quite generally cultivated, although in the province of Oriente much greater attention is paid to it than elsewhere.

Indian corn is a grain of much importance in the agriculture of Cuba. It is raised in every province in considerable quantity, but most attention is paid to it in Oriente.

Malanga, a farinaceous root, is raised quite generally for food throughout the island, but the greater part of it is produced in the province of Pinar del Río. Only a trifling amount is raised in Camagüey.

Yucca is produced in every province, but the most attention is paid to it in Oriente.

Coffee, once a crop of great importance, is now produced in but small quantity. Nearly one-half of the area devoted to this produce is situated in Oriente.

The cultivation of the cocoanut palm is confined almost exclusively to Oriente.

The production of cocoa is confined almost exclusively to Oriente as is also the production of yams.

Irish potatoes are raised to a limited extent. About one-half of the total crop is raised in Havana Province.

Pineapples are raised in every province, but more than four-fifths of the product comes from Havana Province.

Oranges are raised to a much greater extent in Havana and Matanzas Provinces than in any of the others.

Of the onion product, more than two-thirds comes from the province of Havana.

FRUITS AND VEGETABLES.

The fruits of Cuba are numerous and delicious. Among them are the pineapple, banana, cocoanut, and orange, which need no description.

Aguacate (*alligator pear*).—This is one of the most popular fruits. It is pear shaped, green or purple, and often weighs 2 pounds. On account of the pulp being firm and marrow-like it is also known as vegetable marrow or "midshipman's butter." With French dressing it makes a delicious salad. A very good oil for soap comes from its seed. It grows on a tree.

Caimito.—This fruit is purple or dark green on the outside. It has a milky, fibrous meat, sweet and starchy, and a number of round black seeds. It grows on a tree.

Chirimoya (*custard apple*).—This is a heart-shaped fruit, quite sweet, with a slightly acid taste and very refreshing. It has a smooth peel and contains numerous seeds buried in a pulp. It is sometimes known as "bullock's heart," on account of its size and shape. Grows on a tree.

Anon.—Somewhat similar to the above, except that it has a scaly exterior.

Figs (*higos*).—Grow luxuriantly.

Granadilla.—Grows on a vine which bears the passion flower. The fruit is generally as large as a child's head. The meat is glutinous and contains many small seeds. It is much used in making refreshing drinks and desserts.

Guanábana.—A large fruit about the size of a muskmelon, with many seeds, and having a fibrous meat with a delicate flavor. It is eaten in its natural state and also used for making drinks, ices, and preserves.

Guava.—The guava is a pulpy fruit with an agreeable acid flavor and is used in making jelly, marmalade, etc. There are two varieties, the red or apple-shaped and the white or pear-shaped.

Lima.—Somewhat like the lime, but has the flavor of a grape.

Lime (*limon citrus*).—The juice is much used in summer beverages in the Tropics.

Mamey (*sapote*).—The mamey or sapote tree yields a fruit the juice of which resembles marmalade. It is known locally as the "mamey colorado," red mamey, in contradistinction to the mamey of Santa Domingo, which is yellow in color and is also grown here, but is eatable only after cooking.

Mamoncillo.—The fruit grows on a tree in clusters. It is a species of plum, is tart, and has one fibrous pit. The juice will stain clothes black, like ink.

Mango.—A fruit shaped somewhat like a pear, but attached to the tree by the larger end. The meat is fibrous and clings to the seed, somewhat like that of a clingstone peach. Sometimes used as a vegetable when green. When ripe, its flavor is delicious. There are several varieties of this fruit, of which the Philippine variety is the best, the meat being less fibrous.

Papaya (*paw-paw*).—The papaya is about 10 inches long, ribbed, and has a thick fleshy rind. It is eaten raw or boiled as a vegetable when green. It is also pickled. The tree is about 20 feet high and has large leaves at the top only. Meat boiled with a small portion of the leaf is made tender, or can be made tender by hanging it among the leaves. The seeds of the fruit are used as a vermifuge.

Sapote or Sapotillo (*plum*).—A small brown fruit with black, watermelon-like seeds and juice which disappears with incipient decay, and the fruit becomes very sugary.

The following vegetables are raised: Corn, sweet potatoes, tomatoes, onions, peppers, eggplant, okra, etc.

Besides the above are the following:

Yucca.—Two varieties, the sweet or edible variety and the sour or poisonous one. The sour variety is used in the manufacture of starch, of which it contains about 20 per cent.

Ñame (*yam*).—Cultivated on a small scale on the outskirts of large cities.

Malanga.—A tuber having an agreeable taste, similar to that of the white yam.

Banana (*plantain*).—Constitutes one of the principal articles of food of all Cubans.

POPULATION.

According to the census taken in 1907, the total population of the island of Cuba is 2,048,980, the racial percentage being as follows: White, 69.7 per cent; colored, 30.3 per cent.

The percentage of native whites is 59.8 per cent, and of foreign whites 9.9 per cent.

The total population of each province is as follows:

Pinar del Río	240, 372
Havana	538, 010
Matanzas	239, 812
Santa Clara	457, 431
Camagüey	118, 269
Oriente	455, 086

The racial percentages in the different provinces are given in the following table:

Province.	Native white.	Foreign white.	Colored.
Pinar del Río	68.7	6.4	24.9
Havana	58.7	17.9	23.4
Matanzas	54.6	7.4	38.0
Santa Clara	63.9	8.6	27.5
Camagüey	75.0	6.7	18.3
Oriente	50.9	6.0	43.1
Cuba	59.8	9.9	30.3

The number of males of military age (18 to 45 years) in the island of Cuba is as follows:

Province.	Native white.	Colored.	Foreign white.	Total.
Pinar del Río	33,521	11,551	9,588	54,660
Havana	65,617	26,125	52,761	144,503
Matanzas	26,837	16,144	8,951	51,932
Santa Clara	58,638	23,966	23,693	106,297
Camagüey	16,612	4,196	4,526	25,334
Oriente	41,094	35,421	16,407	92,922
Total	242,319	117,403	115.926	475,648

Leaving out of consideration the foreign white element, the military population is 359,702, divided as follows: White, 67.3 per cent; colored, 23.7 per cent.

The population of the city of Havana is 297,159, and the racial percentages are as follows: Native whites, 50 per cent; foreign whites 24.5 per cent; colored, 25.5 per cent.

The urban population of the island, including in that term the inhabitants of all towns of more than 8,000 population, is 619,835, or 30.3 per cent, being a trifle smaller than that of the United States. If we include all towns of a population of 1,000 and over, the urban population rises to 899,667, or 43.9 per cent, which is a little less than that of the United States.

LANGUAGE, RELIGION, AND EDUCATION.

The only language generally spoken in the island is Spanish; although on account of its proximity to the United States many of the better educated Cubans speak English.

The great majority of the Cuban people profess the Roman Catholic religion; but there is no favoritism or intolerance, the people adapting themselves without any difficulty to the religious liberty provided for by the constitution.

The establishment of churches of other denominations is respected and accepted as quite natural.

In Cuba, as in all other Spanish possessions, public instruction was practically ignored.

At the time of the American intervention the appropriations for schools were far from adequate and their administration most imperfect.

The teachers were poorly paid and their methods of instruction most antiquated. The first care of the American military government was to provide teachers and schools of primary instruction throughout the island.

Adequate buildings for schools were provided and the number of schoolhouses and teachers rapidly augmented.

The institutes of secondary instruction at Havana and Matanzas were recognized, and those at Santa Clara, Camagüey, Santiago de Cuba, and Pinar del Río were reopened.

An academy of stenography and typewriting was inaugurated; the school of commerce at the Institute of Havana was reorganized; schools of surveyors were opened at those of Matanzas, Camagüey, Santiago de Cuba, and Pinar del Río, and the chair of agriculture, which had been suppressed, was again established in all the institutes.

A reform of the University of Havana also took place. Under the system adopted the university was divided into three faculties, viz, letters and science, medicine and pharmacy, and law.

The faculty of letters and sciences consists of the following: School of letters and philosophy, school of pedagogy, school of sciences, school of engineers, electricity, and architecture, and school of agriculture.

The faculty of medicine and pharmacy consists of school of medicine, school of pharmacy, school of dental surgery, school of veterinary surgery.

The faculty of law consists of the school of civil law, school of public law, school of notarial law.

The School of Painting and Sculpture of Havana was reorganized.

The School of Arts and Trades of Havana was also generously provided for.

The Normal School, kindergarten for teachers, was also established in Havana.

The Cuban Government, since its advent, May 20, 1902, has tried to continue the good work of its predecessor in the matter of education.

The number of schoolrooms has been increased, largely in the rural districts.

The school law considers "city" district, the town with more than 10,000 inhabitants, and "rural," those with less.

AGRICULTURE, INDUSTRY, AND COMMERCE.

Agriculture is the source of practically all the wealth of Cuba. The agricultural resources have not been developed, and the practices are antique, although rapid strides have been made in introducing modern agricultural methods since the war of 1898. The principal crop is sugar, of which there was produced 1,132,482 tons (of 2,240 pounds to the ton) in 1906. A large amount of molasses and alcohol is also manufactured from sugar products. Next to sugar in value comes live stock, next comes tobacco, and then fruits. Considerable honey and wax are also produced. A small amount of coffee is grown in the island. Most of the tobacco is from west of Havana, the finest coming from the Vuelta Abajo district in Pinar del Río Province.

The tobacco crop of Cuba amounts to about $30,000,000 per annum. For the year ending June 30, 1906, Cuba exported to the United States cigars and cigarettes valued at $4,000,000 and leaf tobacco to the value of $13,500,000.

The agricultural development is retarded by the bad country roads. These roads are impassable except for horses and ox carts. Near the large cities the government is building fine macadam roads which will be extended rapidly in the next two years.

There is very little coffee grown in Cuba. This was formerly an important crop, but since slavery was abolished the cost of labor makes coffee growing unprofitable. Practically no cotton is grown, as the boll weevil is very bad.

The soils of Cuba are generally very fertile, but hard to cultivate, as the red and black lands contain so little sand that implements do not scour. Sugar cane is cut once annually for from eight to ten years without replanting and with very little cultivation.

The principal fruits grown are pineapples, oranges, grape fruit, limes, lemons, tangerines, bananas, cocoanuts, mangoes, and guavas.

Vegetables are grown during the dry (winter) season, as follows: Tomatoes, eggplant, peppers, Irish potatoes, and sweet potatoes; the latter grow abundantly all the year.

The foreign commerce of Cuba amounts to about $200,000,000 annually. Of this one hundred and ten millions are exports and ninety-five millions are imports. About 87 per cent of the exports are to and 50 per cent of the imports are from the United States. The principal exports are sugar, tobacco, fruits, and valuable timber, such as cedar and mahogany. The principal imports are cattle, mules, horses, provisions, oil, coal, lumber, machinery, and manufactured goods.

About 50 per cent of the wage-earning class of Cuba are engaged in agricultural pursuits. There is little manufacturing except sugar, cigars, and cigarettes.

EARTHQUAKES.

Earthquakes seem to be less frequent than they were, particularly in the district of Oriente. In this district they reached their greatest intensity, being insignificant in the center of the island and very rare in the western part. The most severe ones occurred in 1774, 1842, 1852, and 1880.

RAILROADS.

The various railroads of Cuba form what may be termed a "backbone" railway, with feeders to the north and south coasts. There is a continuous line of road running practically down the center of the island from Guane, in Pinar del Río Province, to Guantánamo Bay, in Oriente Province. The railroads may be divided into two general classes, viz, public and private.

Brief descriptions of the public railroads follow:

THE UNITED RAILROADS OF HAVANA.

This road is divided into four main divisions.

Regla division.—This division runs from Regla (reached by ferry from Muelle de Luz, Havana) to Jovellanos. It has five branches:

1. Regla to Guanabacoa.
2. Triscornia to Casa Blanca.
3. Benavides to San Francisco (cane line).
4. Military branch, from Matanzas to the north coast (not used).
5. Coliseo to Guamacaro (cane line).

At Jovellanos the Regla division connects with the "Central" line of the Cárdenas division, and also with the Montalvo branch to Navajas.

Villanueva division.—This division consists of one main line and seven branches. The main line of the division runs from Havana (Villanueva Station) to Unión de Reyes. The branches are as follows:

1. Guanajay branch, from Rincón to Guanajay.
2. Batabanó branch, from San Felipe to Batabanó.
3. Regla branch, from Ciénaga to Regla and connecting at Regla with the Regla division.
4. Madruga branch, from Empalme to Madruga.

5. Empalme branch, from Empalme to Güines.
6. Marianao branch, from Concha Station, Havana, to Hoyo Colorado, crossing the Villanueva division at Ciénaga.
7. Alfonzo XII branch, from Alfonzo XII (Alacranes) to Unión de Reyes.

Matanzas division.—This division runs from Matanzas through Unión de Reyes to Esles, and has seven branches. The Villanueva division joins the Matanzas division at Unión de Reyes, and trains are run from Villanueva Station, Havana, over the Matanzas division to Colón. A plan is being considered of extending the line from Esles to Rodas, on the Cuban Central Railroad, and running through trains from Havana to Cienfuegos.

The branches are as follows:

1. Cabeza branch, from Unión de Reyes to Cabeza.
2. Güira-Nieve branch, from Güira to Nieve.
3. Atrevido branch, from Navajas to Atrevido.
4. Jagüey branch, from Navajas to Murga.
5. Manguito branch, running south from Guareiras to Manguito.
6. Colón branch, from Guareiras to Colón.
7. Branch running east from kilometer 106 on the Colón branch.

Cárdenas division.—This division consists of two main lines and three branches. One main line is known as the Cárdenas or "Central" line, and runs from Cárdenas, through Jovellanos, to Esperanza, which is a short distance from Santa Clara. Trains from Regla to Santa Clara and the east use the section from Jovellanos to Esperanza as a continuation of the Regla division and the part of the line from Cárdenas to Jovellanos is practically a short branch line. The second main line is known as the Júcaro line and runs south from Cárdenas to Antón Recio. The line, however, is operated only as far as Yaguaramas. Beyond this point the only traffic consists of an occasional freight train, and it is the intention to abandon this stretch in favor of an extension from Esles to Rodas. The branches are as follows:

1. Montalvo branch, from Jovellanos to Navajas.
2. Maçagua branch, from Altamisal to Macagua.
3. Itabo branch, from Recreo to Itabo.

THE CUBAN CENTRAL RAILROAD.

This system is a combination of five different lines and consists of one main line and eight branches. The main line runs from Concha [Isabela de Sagua] on the north coast of Cuba through Sagua la Grande and Cruces to Cienfuegos. The branches are as follows:

1. Aguada or Rodas branch leaves the main line just north of Palmira and runs to Aguada de Pasajeros on the Cárdenas division of the United Railroads of Havana.
2. Santa Clara branch, from Cruces to Santa Clara.
3. Sitiecito-Caibarién branch, from the main line at Sitiecito to Caibarién.
4. Camajuaní-Placetas branch leaves the Sitiecito branch at Camajuaní.
5. Placetas-Caibarién branch is a 3-foot narrow gauge road joining the two points named.
6. San Juan branch leaves the Santa Clara branch at kilometer 92.5 and runs about 6 miles to the south.
7. Caguagua branch, from Sagua to Caguagua.
8. Calabazar branch leaves the Sitiecito-Caibarién branch at kilometer 52 and runs 2 miles to the north.

THE WESTERN RAILWAY OF HAVANA.

This road runs from Cristina Station, Havana, south to Gabriel, from which place it runs west through Pinar del Río to Guane. The branches are three in number and are small.

1. Hacendados branch begins at kilometer 1.114 and terminates on the Hacendados pier. At this point boats of 18-foot draft can unload.
2. Fajardo branch leaves main line at kilometer 38 and runs to the sugar mill Fajardo.
3. Pilar branch leaves the main line at kilometer 68.3 and runs to the sugar mill Pilar.

GUANTÁNAMO RAILROAD.

The main line of this railroad runs from Guantánamo to Caimanera. From the latter place a small branch runs to Deseo. From Guantánamo branches run to the Soledad sugar plantation, to the Isabel sugar plantation via the town of Jamaica, and to the San Carlos sugar plantation via the village of the same name.

GIBARA AND HOLGUÍN RAILROAD.

The main line of this railroad runs from Gibara to Holguín. There is one branch which leaves the main line at Iberia and runs to Velasco.

HAVANA CENTRAL RAILROAD.

This is an electric road which runs from the Arsenal Station, Havana, to Guanajay and to Güines. Lines from Havana to Batabanó, from Arroyo Arenas to San Antonio, and from Güines to Melena del Sur are in process of construction (1908). The following connections are made with other roads: United Railroads of Havana at kilometer 3 and kilometer 12; Western Railway of Havana at kilometer 9; Central Toledo Railway at kilometer 13; Insular Railway at kilometer 14; and Marianao branch of the United Railroads of Havana at kilometer 20.

CUBAN ELECTRIC RAILWAY.

This road runs from Regla station (connected with Havana by ferry) to Guanabacoa. No branches and no connection with other roads.

TUNAS AND SANCTI SPIRITUS RAILROAD.

This railroad runs from Sancti Spiritus to Tunas and there are no branches. The road has but one serviceable locomotive. The track is in very bad condition and locomotives belonging to other roads could not be run on it, as very probably the bridges would collapse.

THE CUBA COMPANY RAILROAD.

This railroad runs from Santa Clara to Santiago de Cuba and has four branches:

1. Zaza-Sancti Spiritus branch connects the two points named.
2. Cacocum-Holguín branch connects the two points named.
3. Nipe branch, from Alto Cedro to Antilla.
4. Sabanilla branch, from Morón to La Maya.

YAGUAJAY RAILROAD.

This railroad runs from La Playa de Carbo on the north coast to Yaguajay and has a branch to Centeno. The branch to Jobo Rosado is not open to the public. Connects with the Narcisa Railroad, which runs from Júcaro (a wharf 15 miles east of Caibarién) to Yaguajay, and with the Victoria Railroad, which runs from the sugar mill of the same name to Playa de Victoria on the north coast. These three railroads are all connected together, are of practically the same gauge, and for military purposes could be used as one system. The gauge of the Victoria and Yaguajay lines is 27½ inches and that of the Narcisa is 27¾ inches.

NORTH AMERICAN SUGAR COMPANY RAILROAD.

This is the proper name of the Narcisa Railroad and the road is described under the Yaguajay Railroad.

JURAGUÁ RAILROAD.

This railroad runs from Castillo de Jagua to Pamplona, via the sugar mill Juraguá. There are two short branches—one is at Guásimal and one at Ojo de Agua.

RESULTA RAILROAD.

This road runs from Resulta (situated on the Sagua la Grande River) to Calabazar. It is a private railroad, but has the privilege of being operated as a public railroad. As yet advantage has not been taken of the privilege (1908).

PUERTO PRINCIPE-NUEVITAS RAILROAD.

This road runs from Camagüey to Nuevitas.

JÚCARO AND SAN FERNANDO RAILROAD.

This road runs from Júcaro to San Fernando. A branch runs from La Carolina, 5⅛ miles south of Ciego de Avila, to the sugar mill Jagüeyal. Connection is made at Ciego de Avila with the Cuba Company Railroad, and at Quince y Media with the Stuart Sugar Company Railway.

CENTRAL CARACAS RAILROAD.

This railroad runs from the sugar mill Caracas to Cruces. It has the following branches: From the sugar mill Caracas to Lajas; from kilometer 1.5 on the Caracas-Lajas branch to the Sagua River; from Caracas to the Salado River, via Ceiba Hueca and Ciego Montero; from Caracas to the Sagua River branch at kilometer 7. There are also numerous short spurs running from the branches to various colonias.

CUBA EASTERN RAILROAD.

This road runs from Boquerón on the east side of Guantánamo Bay to Guantánamo and to San Luis on the Cuba Company Railroad. It has three short branches—one to Confluente, one to Esperanza, and one to Marco Sanchez.

INSULAR RAILWAY.

An electric street railway running from Vedado, Havana, to Marianao. At Vedado it connects with the Havana Electric Railway, which is the city system. It also connects with the Havana Central Railroad at Toledo Station, near Marianao. The road has a concession to construct two more lines from Havana to other cities in Havana Province, and there is a project to extend the Vedado-Marianao line to Mariel.

CHAPARRA SUGAR COMPANY RAILROAD.

The public portion of this road is as follows: From Velasco, northwest through San Juan and El Retiro, to the sugar mill Chaparra, and from the sugar mill west to Las Delicias. At Velasco the road connects with a branch of the Gibara-Holgúin Railroad. A private branch of the road runs from Delicias to San Manuel, where connection is made with the San Manuel Railroad (private), which runs north to Puerto Padre. There is also a private branch from Chaparra to the Cascarero wharves on Chaparra Bay.

Public railroads.	Gauge.	Weight of rails per yard.	Length.
			Miles.
United Railroads of Havana	Standard	62 pounds	649
Cuban Central R. R.	Standard; Caibarién to Placetas Norte, 3 feet; Sagua to Caguagua, 2 feet 6 inches.	Main line, 65 to 80 pounds; narrow-gauge branches, 50 pounds.	294
Western Ry. of Havana	Standard	62½ pounds; 48 miles of 80 pounds.	125
Guantánamo R. R.	do	60 pounds	23
Gibara and Holguin R. R.	3 feet	Main line, 35 pounds; branch, 45 pounds.	29
Havana Central R. R.	Standard	75 pounds	63½
Cuban Electric Ry	do	85 and 110 pounds	3¼
Tunas-Sancti Spiritus R. R.	do	65 pounds	24½
Cuba Company R. R.	do	60 pounds; Sabanilla branch, about 56 pounds.	422
Yaguajay R. R.	27½ inches	45 pounds	7½
North American Sugar Co. R. R. (Narcisa R. R.).	27¾ inches	do	8⅛
Juraguá R. R.	30 inches	30 pounds	28$\frac{7}{16}$
Resulta R. R.	do	45 pounds	22½
Puerto Principe-Nuevitas R. R.	5 feet	56 pounds	54
Júcaro-San Fernando R. R.	Standard	60 pounds	42½
Central Caracas R. R.	30 inches	25 to 45 pounds	61$\frac{9}{16}$
Cuba Eastern R. R.	Standard	60 and 75 pounds	77$\frac{8}{10}$
Insular Ry	do		
Chaparra Sugar Co. R. R.	3 feet	40 to 45 pounds	18⅛

The information given in the description of the public railroads is of a general character. All may be classed as single track roads and roadbeds classed as good with the exception of the Tunas-Sancti Spiritus R. R. Rolling stock is limited in amount and in event of heavy movement of troops it would be necessary to use box and cane cars. All the roads have an unusual number of bridges and culverts and in event of active operations a heavy railroad guard would be necessary to keep the roads open for traffic.

There is on file in the Second Section, General Staff, a detailed report on each railroad, including tables of rolling stock, itinerary of road, and plans, dimensions, and photographs of all important bridges and culverts.

A map has also been compiled which shows the location of the public and private railroads of the island.

The private railroads are owned by various sugar estates and mining and fruit companies.

They have been grouped by province and a brief description of each road is given.

PINAR DEL RÍO PROVINCE.

CENTRAL BRAMALES RAILWAY.

Situated at Cabañas. Four and three-eighths miles of plantation railroad running from the wharf to the sugar mill and from the sugar mill to the cane fields. Gauge, 57 inches; weight of rail, 37 pounds; rolling stock, 1 locomotive and 47 flat cars.

INDUSTRIAL AND MINERAL CUBAN COMPANY RAILWAY.

Situated near Guanajay. This narrow-guage road runs from the wharves at Mariel through the village to San Juan Bautista (Guanajay). The road passes the sugar mill San Ramon. Rolling stock, 6 cars.

CENTRAL LUCÍA RAILWAY.

Situated near Boca del Río Banes. Five miles of narrow-gauge road connecting the sugar mill with the wharf at Boca del Río Banes. The road also extends southwest 6 miles from the sugar mill to Encarnación. Gauge, 36 inches;

weight of rail, 35 pounds; rolling stock, 2 locomotives, 4 box cars, 2 tank cars, and 40 flat cars.

CENTRAL MERCEDITA RAILWAY.

Situated near Cabañas Bay. Six miles of narrow-gauge road running from the sugar mill San Juan Bautista to the plantation wharf at Cabañas Bay. There are several sidings. Gauge, 38 inches; weight of rail, 45 pounds; rolling stock, 1 locomotive and 50 flat cars.

CENTRAL OROSCO (OR LA LUISA) RAILWAY.

Situated near Cabañas. One and seven-eighths miles of standard-gauge road, running from the sugar mill to the pier at Cabañas Bay. Gauge, 57 inches; weight of rail, 35 pounds; rolling stock, 25 cars. Cars pulled by oxen.

CENTRAL SAN RAMON RAILWAY.

Situated near Guanajay. Two and one-half miles of narrow-gauge road, running from the sugar mill to Mariel. Two branches run from the sugar mill; one is 6¼ miles long and runs from the sugar mill to Jabacó, and the other is 5 miles long and runs from the sugar mill to San Juan Bautista (Guanajay). Gauge, 36 inches; rolling stock, 2 locomotives and 30 cane cars.

HAVANA PROVINCE.

CENTRAL AMISTAD RAILWAY.

Situated near Güines. The road is made up of two spurs, and has a total length of 9⅜ miles. One spur runs from the sugar mill to U. H. R. R. between Güines and Madruga and the other runs from the sugar mill to the U. H. R. R. at Río Seco Station. Gauge, standard; weight of rail, 60 pounds; rolling stock, 2 locomotives and 60 cane cars.

INGENIO AVERHOFF RAILWAY.

Situated near Aguacate. One-quarter mile spur running from the sugar mill to the U. H. R. R. between Bainoa and Aguacate. Gauge, standard; weight of rail, 60 pounds; rolling stock, 1 locomotive.

INGENIO CARMEN RAILWAY.

Situated near Jaruco. There is a switch from kilometer 42 of the Havana-Matanzas line of the U. H. R. R. to the mill and a narrow-gauge road (Carmen-Lotería) running from Carmen to Lotería. The gauge of the switch is standard, that of the Carmen-Lotería is narrow. (See Lotería.) Rolling stock, 2 locomotives, 50 freight cars, and 2 passenger cars.

INGENIO MAJAGUA RAILWAY.

Situated near Gabriel. One and seven-eighths miles of road running from the sugar mill to the Western Railway of Havana. Gauge, standard; weight of rail, 60 pounds; rolling stock, 9 cane cars.

INGENIO JOSEFITA RAILWAY.

Situated near Los Palos. A switch one-half mile long, running from the U. H. R. R. to the sugar mill. There is also an unused piece of road running to the finca Navarra. Gauge, standard; weight of rail, 60 pounds; rolling stock, 2 locomotives.

INGENIO LA JULIA RAILWAY.

Situated near Duran. A narrow-gauge road from the sugar mill to San Antonio de las Vegas. Gauge, 30 inches; weight of rail, 34 pounds; rolling stock, 12 cane cars.

INGENIO LOTERÍA RAILWAY.

Situated near Jaruco. A road pertaining to the Carmen and Lotería sugar mills and running from kilometer 42, Havana and Matanzas line of the U. H. R. R., through Carmen to Lotería. At Lotería the road divides into three branches. One runs to San Antonio, one to Carraballo, and one to a plantation south of Mamey Duro, at which point the road again connects with the U. H. R. R. There is also a short branch running from Carmen to a near-by plantation. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 2 locomotives, 50 freight cars, and 2 passenger cars.

CENTRAL LUCÍA RAILWAY.

Situated near Bauta. Nine and three-fifths miles of road, having the following branches: From sugar mill to Banes Bay; from sugar mill to Encarnación; from sugar mill to asphalt mine; Florencia branch to Baracoa. Gauge, 30 inches; weight of rail, 35 pounds; rolling stock, 2 locomotives, 60 flat cars, and 3 tank cars.

INGENIO MERCEDITA RAILWAY.

Situated near Melena. Road runs from the sugar mill to a point near Palenque. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 2 locomotives and 100 cane cars.

INGENIO NOMBRE DE DIOS RAILWAY.

Situated near Güines. A switch running from the U. H. R. R. between Palenque and Güines to the sugar mill. Gauge, standard; rolling stock, 1 locomotive.

CENTRAL NUEVA PAZ RAILWAY.

Situated near Las Vegas. Eighteen miles of road connecting with the U. H. R. R. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 2 locomotives, 60 box cars, and 100 flat cars.

CENTRAL PROVIDENCIA RAILWAY.

Situated near Güines. Four and three-eighths miles of road running from the sugar mill to the railroad station at Palenque. Gauge, standard; weight of rail, 45 pounds; rolling stock, 2 locomotives and 41 cane cars.

There is also a narrow-gauge line running to Cabeza de Vaca and Santa Teresa, and to Cajayas and Barranquito. Gauge, 30 inches; weight of rails, 35 pounds; rolling stock, 3 locomotives and 85 cane cars.

INGENIO ROSARIO (PELAYO) RAILWAY.

Situated near Aguacate. Fifteen and five-eighths miles of road. A branch running to Via Cruces and Juquete connects with the U. H. R. R. at kilometer 60. Gauge, standard; weight of rail, 62 pounds; rolling stock, 2 locomotives and 64 cane cars.

INGENIO SAN AGUSTÍN RAILWAY.

Situated near Quivican. A switch, 5 miles long, running from the station of Quivican to the sugar mill. Gauge, standard; weight of rail, 60 pounds; rolling stock, 1 locomotive and 8 cane cars.

INGENIO SAN ANTONIO RAILWAY.

Situated near Madruga. A switch one mile long, running from the U. H. R. R. at Madruga to the sugar mill. Gauge, standard; weight of rail, 60 pounds; no rolling stock.

INGENIO SAN JOSÉ RAILWAY.

Situated near Melena. A standard-gauge switch running from the station at Melena to the sugar mill and a narrow-gauge line, 3¾ miles long, running from the sugar mill to La Luisa. This line connects with the narrow-gauge railroad running through Melena del Sur. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 1 locomotive and 33 cars.

CENTRAL SAN MIGUEL DEL JOBO RAILWAY.

Situated near Las Vegas. One-quarter mile of standard-gauge track connects the mill with the side track of the U. H. R. R. passing the mill. No rolling stock.

INGENIO SANTA RITA RAILWAY.

Situated near Sabana Robles. Switch running from the railroad at Sabana Robles to the mill. Gauge, standard; weight of rail, 60 pounds; rolling stock, 2 locomotives and 21 cane cars.

INGENIO TERESA RAILWAY.

Situated near San Nicolás. Eighteen and three-quarter miles of road. It runs to Guana, near the south coast, and connects with the U. H. R. R. Gauge, standard; weight of rail, 60 pounds; rolling stock, 2 locomotives, 60 cane cars, and 3 tank cars.

CENTRAL TOLEDO RAILWAY.

Situated near Marianao. Seven and one-half miles of road, connecting with the Guanajay line of the Havana Central Railroad and with the Insular Railway (part of the Havana Electric Railway). Gauge, standard; weight of rail, 60 pounds; rolling stock, 2 locomotives and a few cane cars.

MATANZAS PROVINCE.

INGENIO AGUEDITA RAILWAY.

Situated near Macagua. Spur, 2½ miles long, from U. H. R. R. to sugar mill. Gauge, standard; rolling stock, 2 locomotives and 12 cane cars.

INGENIO ÁLAVA RAILWAY.

Situated near Banagüises. Twelve miles of road running from the sugar mill to various colonias and connecting with the U. H. R. R. One branch runs to Banagüises, one to the finca Havana, and one to the finca Conchita. Gauge, standard; weight of rail, 70 pounds; rolling stock, 7 locomotives, 66 small cars, 68 large cars, and 4 tank cars.

INGENIO ANGELITA RAILWAY.

Situated near Recreo. A spur 2¼ miles long running from the railroad at Villalba Station to the sugar mill. Gauge, standard; weight of rail, 55 pounds; no rolling stock.

INGENIO ARAUJO RAILWAY (FORMERLY NENA).

Situated near Manguito. This road runs from Manguito to the sugar mill and from there to the ingenio Esperanza. From Esperanza the road runs east to the Cárdenas line of the U. H. R. R. There are 4 miles of track. Gauge, standard; rolling stock, 20 cane cars.

CENTRAL ARMONÍA RAILWAY.

Situated near Bolondrón. Two and one-third miles of road running from the sugar mill to the station at Bolondrón. Gauge, standard; weight of rail, 60 pounds; rolling stock, 1 locomotive and 24 cane cars.

INGENIO AUSTRALIA RAILWAY.

Situated near Jagüey Grande. Eight and three-quarter miles of road running from the sugar mill to the Jagüey branch of the U. H. R. R. Gauge, standard; rolling stock, 1 old-style locomotive and 50 small cane cars.

INGENIO LAS CAÑAS RAILWAY.

Situated near Alacranes. Thirteen and one-half miles of road running from the sugar mill to the settlement named Tinajita and connecting with the U. H. R. R. at Unión. A siding runs to Estante. Gauge, standard; weight of rail, 30 pounds; rolling stock; 2 locomotives and 42 cane cars.

CENTRAL CARMEN RAILWAY.

Situated near Navajas. Consists of ½ mile of standard-gauge and 3⅛ miles of narrow-gauge road. The standard-gauge portion runs from the sugar mill to the Jagüey branch of the U. H. R. R. The narrow-gauge portion runs from the mill to the San Miguel sugar mill. Weight of rail, standard, 80 pounds, and narrow, 25 pounds; rolling stock, standard, 5 tank cars, and narrow, 2 locomotives and 32 cars.

INGENIO CAROLINA RAILWAY.

Situated near Coliseo. A combination standard and narrow-gauge track, 1 mile in length, runs from Coliseo on the U. H. R. R. to the sugar mill. Weight of rail, standard, 50 pounds, and narrow, 30 pounds; rolling stock, 1 narrow-gauge locomotive.

INGENIO LA CATALINA RAILWAY.

Situated near Recreo. One mile of standard-gauge track running from the sugar mill to the Itabo branch of the Cárdenas division of the U. H. R. R. Rolling stock, 1 locomotive and 20 cane cars.

INGENIO CONCHITA RAILWAY.

Situated near Alacranes. Consists of 36¼ miles of narrow-gauge and 1⅛ miles of standard gauge road. The narrow-gauge portion runs from the sugar mill to Cocodrillo and has branches to Majagua, Esperanza, and Cruces. The standard-gauge portion runs around the mill and is the property of the U. H. R. R. Gauge, 29 inches; weight of rails, 30 pounds; rolling stock, 5 locomotives and 200 cane cars (narrow gauge).

CENTRAL DOLORES RAILWAY.

Situated near Jovellanos. Four and three-eighths miles of road running from the sugar mill to Medina on the U. H. R. R., and also connecting with the Atrevido branch of the U. H. R. R. Gauge, standard; weight of rail, 50 pounds; rolling stock, 3 locomotives and 7 cars.

INGENIO DOS ROSAS RAILWAY.

Situated near Cárdenas. Two and one-half miles of narrow-guage road runs from the colonia Dolores and connects at the Dolores cane loader with a spur of the Ingenio Preciosa Railway. A branch, 1¼ miles long, runs from the sugar mill to the Siguapa branch of the Preciosa Railway.

INGENIO DULCE NOMBRE RAILWAY.

Situated near Macagua. A standard-guage spur, 4 miles long, runs from the sugar mill to the U. H. R. R. There is also 4 miles of narrow-gauge road running from the sugar mill to the cane fields. Rolling stock, 1 standard and 1 narrow gauge locomotive.

CENTRAL ENRIQUETA (SANTA FILOMENA) RAILWAY.

Situated near Corral Falso. Three and one-sixth miles of standard-gauge road. One branch runs from the sugar mill to Navajas, where it joins the U. H. R. R. Another branch joins the same road at Corral Falso and also near Arratia. Rolling stock, 6 cane cars.

INGENIO ESPAÑA RAILWAY.

Situated near Perico. A standard-guage road, 3 miles long, running from the sugar mill to the Cárdenas division of the U. H. R. R. Weight of rail, 70 pounds; rolling stock, 2 locomotives.

INGENIO ESPERANZA RAILWAY.

Situated near Manguito. Small branch from sugar mill to Ingenio Araujo Railway.

INGENIO FELIZ RAILWAY.

Situated near Bolondrón. Two miles of standard-gauge track running from the sugar mill to the U. H. R. R. at kilometer 39, and from this point to colonia San José de Olano, 1 mile west. Weight of rail, 70 pounds; rolling stock, 1 locomotive and 15 cane cars.

INGENIO FLORA RAILWAY.

Situated near Güira. A short standard-gauge spur, one-half mile long, runs from mill to U. H. R. R. There are two other spurs. One is 1¼ miles long and runs to the Matanzas division, U. H. R. R., and the other is 3⅛ miles long and runs to Manguito, where it connects with the Cárdenas division of the U. H. R. R.

CENTRAL NUEVA LUISA RAILWAY.

Situated near Jovellanos. Consists of 10 miles of standard-gauge road. One line runs from the mill to Jovellanos, where it joins the Cárdenas division of the U. H. R. R.; another runs from the mill to Madan, where it joins the Matanzas division of the U. H. R. R.; and a third line joins the Atrevido branch of the Matanzas division, U. H. R. R. Rolling stock 2 locomotives, 110 cane cars, and 4 tank cars.

CENTRAL OCCITANIA RAILWAY.

Situated near Colón. About 1 mile of standard-gauge road running from the sugar mill to Macagua, where it joins the U. H. R. R. Rolling stock, 1 locomotive and 30 cars.

CENTRAL OLIMPO RAILWAY.

Situated about 5 miles west of Cimarrones. Seven and one-half miles of standard-gauge road. Five and five-eighths miles of the road runs from Cimarrones Station on the U. H. R. R. to kilometer 171 of the U. H. R. R., between

Madan and Tosca. This portion passes the sugar mill. One and seven-eighths miles of road forms a siding at Tosca and runs north to the finca San Juan. No rolling stock.

INGENIO POR FUERZA RAILWAY.

Situated near Calimete. Nine and three-eighths miles of standard-gauge road connecting with both the Cárdenas and the Matanzas divisions of the U. H. R. R. A branch 1½ miles long runs from the sugar mill to Cumanayagua, and another runs to the main line between Calimete and Amarillas. Rolling stock, 1 locomotive and 1 car.

INGENIO PRECIOSA RAILWAY.

Situated near Cárdenas. Narrow-gauge road running from the sugar mill to the wharf at Siguapa, on Cárdenas Bay, and from the sugar mill to colonia La Coronela; total length, 10¼ miles. A narrow-gauge road of the ingenio Dos Rosas connects these two branches. Gauge, 36 inches; weight of rail, 30 pounds; rolling stock, 2 locomotives, 55 cane cars, and 18 hand cars.

INGENIO GUIPÚZCOA RAILWAY.

Situated near Hato Nuevo. Six and one-half miles of standard-gauge road running from the sugar mill to colonia Victoria. Several narrow-gauge tracks running from the sugar mill into the cane fields. Rolling stock, 2 locomotives and 90 cane cars (narrow gauge).

INGENIO JESÚS MARÍA RAILWAY.

Situated near Matanzas. Standard-gauge road running from the sugar mill to San Francisco de Paula, where it connects with the Benavides branch of the U. H. R. R. Rolling stock, 1 locomotive and 15 freight cars.

INGENIO JICARITA RAILWAY.

Situated near Bolondrón. A standard-gauge spur, 1¾ miles long, runs from Bolondrón Station, on the Matanzas division, U. H. R. R., to the sugar mill. No rolling stock.

CENTRAL LIMONES RAILWAY.

Situated near Limonar. A combination standard and narrow-gauge track, 6 miles long, runs from the sugar mill to the railroad station at Limonar. In addition, three narrow-gauge branches run from the sugar mill into the cane fields. Weight of rail, standard, 60 pounds, and narrow, 30 pounds. Rolling stock, 1 standard and 3 narrow-gauge locomotives, 120 small and 46 large cane cars.

INGENIO MAJAGUA RAILWAY.

Situated near Unión de Reyes. A standard-gauge spur, 2 miles long, runs from the U. H. R. R. at Unión to the sugar mill. No rolling stock.

INGENIO MERCEDES RAILWAY.

Situated near Guareiras. Standard-gauge spur to sugar mill. No rolling stock.

CENTRAL PROGRESO RAILWAY.

Situated near Cárdenas. One and one-half miles of standard-gauge road running from the sugar mill to the Júcaro line of the U. H. R. R. Rolling stock, 1 locomotive and 25 standard-gauge cars.

Five miles of narrow-gauge track runs from the sugar mill into the surrounding cane fields.

CENTRAL PUERTO RAILWAY.

Situated near Arco de Canasí. Three miles of standard-gauge road running from the warehouses at the head of Canasí Bay to the sugar mill and from the sugar mill to Socorro. Rolling stock, 2 locomotives and 22 flat cars.

INGENIO REGLITA RAILWAY.

Situated 2¼ miles southeast of Perico. Nine miles of standard-gauge road connecting the sugar mill with Perico station. Weight of rail, 50 and 60 pounds; rolling stock, 2 locomotives and 32 cane cars.

CENTRAL SANTA RITA RAILWAY.

Situated near Colón. Six and seven-eighths miles of narrow-gauge track running from the sugar mill to Pinion. There is a short branch to San Rafael. Rolling stock, 2 locomotives and 26 cars.

INGENIO LA ROSA RAILWAY.

Situated near Jovellanos. One-quarter mile of standard-gauge track running from the railroad to the sugar mill. No rolling stock.

INGENIO SAN CAYETANO RAILWAY.

Situated near Cidra. Short standard-gauge spur running from U. H. R. R. to sugar mill. No rolling stock.

CENTRAL SAN IGNACIO RAILWAY.

Situated near Agramonte. Two and one-half miles of standard-gauge track running from Agramonte to the sugar mill. Rolling stock, 1 locomotive and 17 cars.

CENTRAL SAN JUAN BAUTISTA RAILWAY.

Situated near Canasí. Small tramway used to carry cane from carts to the mill. Of no military value.

INGENIO SAN NICOLÁS DEL ALGORTA RAILWAY.

Situated near Recreo. Three-quarters of a mile of standard-gauge track running from the sugar mill to the railroad between Recreo and Colón. No rolling stock.

CENTRAL SAN RAFAEL RAILWAY.

Situated near Bolondrón. One and one-quarter miles of standard-gauge track from sugar mill to Bolondrón. From the sugar mill, 5$\frac{5}{8}$ miles of narrow-gauge road runs to the colonia Montana and three-eighths mile to the colonia Guachinango. Rolling stock, 1 locomotive and 70 cane cars (narrow gauge).

CENTRAL SAN VICENTE RAILWAY.

Situated near Jovellanos. Four and one-half miles of standard-gauge road from the sugar mill to the U. H. R. R. near Jovellanos. Rolling stock, 1 locomotive, 15 freight cars, and 1 passenger coach.

INGENIO SANTA AMALIA RAILWAY.

Situated near Coliseo. Three-quarters of a mile of standard-gauge road from the railroad station of Coliseo to the sugar mill. No rolling stock.

INGENIO SANTA CATALINA RAILWAY.

Situated near Corral Falso. Small standard-gauge spur from Corral Falso to the sugar mill. No rolling stock.

CENTRAL SANTA GERTRUDIS RAILWAY.

Situated near Banagüises. Twenty-one and one-quarter miles of standard and narrow gauge road. The standard-gauge portion runs from Banagüises to the sugar mill, and the narrow-gauge portion consists of branches running from the sugar mill into the cane fields. Gauge, narrow, 30 inches; rolling stock, 2 large locomotives and 1 small locomotive, 40 cane cars, and 4 tank cars, standard gauge, and 3 locomotives and 130 cars, narrow gauge.

CENTRAL SANTO DOMINGO RAILWAY.

Situated near Unión de Reyes. Five miles of standard-gauge road running from the sugar mill to Unión de Reyes, on the U. H. R. R. A branch starts at kilometer 2 and terminates at the sugar mill Santa Rosa. Weight of rail, 75 pounds; rolling stock, 1 locomotive and 29 cane cars.

CENTRAL SARATOGA RAILWAY.

Situated near Limonar. The branch road to Güira of the U. H. R. R. ends one-half mile from the sugar mill.

CENTRAL SOCORRO RAILWAY.

Situated 5 miles south of Navajas. There are two branches. One is 8½ miles long and runs from the sugar mill to finca San José de Marcos, near Isabel, crossing the U. H. R. R. at Pedroso. The other starts at Isabel, passes the sugar mill of Isabel, turns toward the sugar mill Elizalde, and ends at the old sugar mill Santa Sofia. This branch is 5½ miles long. Gauge, standard; rolling stock, 3 locomotives, 80 cane cars, and 8 tank cars.

CENTRAL SOLEDAD RAILWAY.

Situated near Jovellanos. Consists of 7½ miles of narrow-gauge road and 1 mile of standard-gauge road. The narrow-gauge road runs from the sugar mill to a point near San Antón. Gauge, 30 inches; weight of rails, 30 pounds; rolling stock 4 locomotives and 72 cars.

The standard-gauge portion runs from the sugar mill to the U. H. R. R. near Jovellanos. No rolling stock.

CENTRAL TINGUARO RAILWAY.

Situated near Colón. Twenty-three miles of standard-gauge road. One line runs from the sugar mill to Pijuan and the other runs from Calimete to Zarabanda and has two small branches. Rolling stock, 3 locomotives, 1 electric railroad motor car, 160 cane cars, and 5 tank cars.

INGENIO EL TRIUNFO (LA JULIA) RAILWAY.

Situated near Coliseo. Eleven and one-quarter miles of combination standard and narrow-gauge road running from the sugar mill to the station of Coliseo on the U. H. R. R. Weight of narrow-gauge rails, 30 pounds; narrow-gauge rolling stock, 2 locomotives and 56 cane cars.

CENTRAL TRIUNVIRATO RAILWAY.

Situated near Cidra. Three and three-quarter miles of narrow-gauge road running from the sugar mill to colonia San Antonio near the Canímar River. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 1 locomotive and 40 cane cars. A standard-gauge spur of the U. H. R. R. runs to the sugar mill.

CENTRAL UNIÓN RAILWAY.

Situated near Agramonte. Ten miles of narrow-gauge road running from the sugar mill to the finca Modela has three small branches. The road is connected with the U. H. R. R. by means of a combination standard and narrow-gauge track. Gauge, 36 inches; rolling stock, 2 locomotives and 40 cane cars.

INGENIO VALIENTE RAILWAY.

Situated near Alacranes. One and one-half miles of standard-gauge road runs from the sugar mill to the U. H. R. R. at Unión de Reyes. Rolling stock, 2 locomotives and 25 cane cars.

COLONIA VEGA RAILWAY.

Situated 3 miles south of Guareiras. One and one-half miles of standard-gauge road joining the two branches of the public railroad running from Guareiras to Manguito. No rolling stock.

INGENIO VICTORIA RAILWAY.

Situated near Jovellanos. The sugar mill is connected with the U. H. R. R. by means of a standard-gauge spur. A small spur runs from the sugar mill into the cane fields. Rolling stock, 1 locomotive.

SANTA CLARA PROVINCE.

CENTRAL ADELA RAILWAY.

Situated near Remedios. Fifteen and one-half miles of narrow-gauge road starts from kilometer 15 of the Cuban Central Railroad, passes the sugar mill, and runs into the cane fields. Gauge, 36 inches; weight of rail, 30 to 40 pounds; rolling stock, 5 locomotives and 122 flat cars.

CENTRAL AGUADA RAILWAY.

Situated near Cienfuegos. Two and four-fifths miles of standard-gauge road runs from the sugar mill to the Cuban

Central Railroad at Aguada. There is also a branch running southwest from the Perseverancia Railroad to Galleon. Weight of rail, 40 and 50 pounds; rolling stock, rented from Cuban Central Railroad.

INGENIO ALTAMIRA RAILWAY.

Situated near Caibarién. Seven miles of narrow-gauge road running from the sugar mill to Zulueta, on the Cuban Central Railroad. There are also two branches running into the cane fields. Gauge, 36 inches; weight of rail, 35 to 50 pounds; rolling stock, 2 locomotives, 1 passenger car, 1 freight car, and 34 cane cars.

INGENIO ANDREITA RAILWAY.

Situated near Cruces. Twenty and five-eighths miles of standard and narrow-gauge road. The narrow-gauge portion, 18¾ miles long, starts at the sugar mill and forms two branches, one terminating at Martiva and the other at Teresa. These branches have spurs running into the cane fields. Weight of rails, 30 pounds; rolling stock, 4 locomotives, 2 freight cars, and 250 cane cars. A standard-gauge spur 1⅞ miles long runs from the railroad at Cruces to the sugar mill.

CENTRAL CARACAS RAILWAY.

Situated near Santa Isabel de las Lajas. One hundred and eleven miles of narrow-gauge road, running from the sugar mill to various portions of the plantation. Gauge, 30 inches; rolling stock, 12 locomotives, 4 passenger cars, 300 cane cars, and 150 small iron cane cars. A standard-gauge spur one-half mile long runs from the sugar mill to the Cuban Central Railroad.

CARAHATAS RAILWAY.

Situated near Carahatas. Five miles of standard-gauge road. Weight of rail, 50 pounds; rolling stock, 2 locomotives, 30 freight cars, and 15 cane cars.

INGENIO CARIDAD RAILWAY.

Situated near Rancho Veloz. Two miles of standard gauge and 5⅝ miles of narrow-gauge road. The standard-gauge portion runs to the railroad at Pozas. Gauge, 29 inches; weight of rail, 25 and 35 pounds; rolling stock, 2 locomotives and 80 cane cars.

INGENIO CAROLINA RAILWAY.

Situated near Cienfuegos. Four miles of narrow-gauge road running from the sugar mill to Cienfuegos Bay. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 2 box cars and 40 cane cars. Oxen used to pull the cars.

CENTRAL SANTA CATALINA RAILWAY.

Situated near Cruces. Five and three-eighths miles of narrow-gauge road having various branches running into cane fields. Gauge, 27½ inches; weight of rails, 40 pounds; rolling stock, 3 locomotives and 15 small and 54 large cars. Three miles of standard gauge track runs from the sugar mill to the main line of the Cuban Central Railroad.

CENTRAL COVADONGA RAILWAY.

Situated near Aguada de Pasajeros. Twelve and one-half miles of standard-gauge road running from Santa Fé to Rosario. The road runs from Santa Fé to the sugar mill and from that point three branches extend to the Ciénaga de Zapata. Connection is made with the Cuban Central Railroad and U. H. R. R. at Santa Fé. Weight of rail, 60 to 80 pounds; rolling stock, 2 locomotives and 60 flat cane cars.

CENTRAL CIENEGUITA RAILWAY.

Situated near Rodas. Thirty miles of narrow-gauge railroad. The road consists of two branches. One branch runs from the sugar mill to Calecito on Cienfuegos Bay, and the other runs from the sugar mill to finca Unguelito. Each branch is 15 miles long. The road connects with the Juraguá Railroad at Anton Recio. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 4 locomotives, 6 box cars, 9 flat cars, and 133 cane cars.

INGENIO CONSTANCIA RAILWAY.

Situated near Encrucijada. A short standard-gauge spur runs from the Cuban Central Railroad to the sugar mill. Weight of rails, 60 pounds; rolling stock, 20 cane cars.

INGENIO CONSTANCIA RAILWAY.

Situated near Rodas. Forty-two and one-half miles of narrow-gauge road connecting Constancia with Santa Clara, Castillito, Yaguaramas, and Horquita. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 9 locomotives, 1 passenger car, 18 flat cars, and 405 cane cars.

CENTRAL DOS HERMANOS RAILWAY.

Situated near Palmira. Sixteen miles of narrow-gauge road running from the sugar mill to the Damují River and into the cane fields. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 3 locomotives, 8 flat cars, and 117 cane cars.

INGENIO DOS HERMANAS RAILWAY.

Situated near Cruces. Five and seven-eighths miles of standard-gauge road. One branch, 1¼ miles long, runs from the sugar mill to the Cuban Central Railroad. The other branch is known as the Santa Rosalia and Pedroso Branch and connects with the portion of the Cuban Central Railroad running into Ranchuelo. Weight of rail, 60 pounds; no rolling stock.

INGENIO ESPERANZA RAILWAY.

Situated near Güines. Thirteen and three-quarters miles of narrow-gauge road. The main line begins at the piers at Playa de Carahatas and ends at the barrio Caguagua, near the station of the narrow-gauge branch of the Cuban Central Railroad. Gauge, 30 inches; weight of rail, 30 and 35 pounds; rolling stock, 1 locomotive and 90 cane cars.

CENTRAL FÉ RAILWAY.

Situated near Camajuaní. Three and one-eighth miles of standard gauge road running from the sugar mill to the colonia Santa Ana. A spur of the Cuban Central Railroad runs from the mill to the sugar mill Julia. Rolling stock, 60 cane cars. Locomotives are obtained from the Cuban Central Railroad.

INGENIO FIDENCIA RAILWAY.

Situated near Placetas. A standard gauge spur, 1½ miles long, runs from the Cuban Central Railroad to the sugar mill. Weight of rail, 60 pounds; rolling stock, 8 cane cars. No locomotives.

INGENIO GRATITUD RAILWAY.

Situated near Manacas. One and one-half miles of narrow-gauge road, running from the sugar mill into the cane fields. Gauge, 26 inches; weight of rail, 40 pounds; rolling stock, 1 locomotive and 35 cane cars.

A standard-gauge spur, 3½ miles long, runs from the U. H. R. R. at Manacas to the sugar mill.

INGENIO HORMIGUERO RAILWAY.

Situated near Hormiguero. Fifty miles of narrow-gauge road. Gauge, 30 inches; weight of rail, 50 pounds; rolling stock, 5 locomotives, 11 flat cars, and 158 cane cars.

INGENIO EL INDIO RAILWAY.

Situated near Esles. One standard-gauge spur runs from the sugar mill to the Matanzas division and one to the Cárdenas division of the U. H. R. R. at Aguada. No rolling stock.

INGENIO JESÚS RAILWAY.

Situated near Quemado. One and one-quarter miles of narrow-gauge road running from the sugar mill to the Sabanilla or Eco plantation. Gauge, 34 inches; weight of rail, 20 pounds; rolling stock, 45 cane cars. Oxen used to haul cars.

INGENIO LA JULIA RAILWAY.

Situated near Camajuaní. Five miles of narrow-gauge road runs from the sugar mill to Salamanca. Part of this road is used by the ingenio Santa Fé. Weight of rail, 75 pounds; rolling stock, 10 cane cars.

CENTRAL LEQUËITIO RAILWAY.

Situated near Rodas. Thirty miles of narrow-gauge road extending to the north of Ojo de Agua and connecting with the Rodas branch of the Cuban Central Railroad. Rolling stock, 4 locomotives and 60 small and 130 large cane cars.

CENTRAL LUISA Y ANTONIA RAILWAY.

Situated near Rancho Veloz. Two and one-half miles of narrow-gauge road on the plantation. Gauge, 30 inches; weight of rail, 25 to 30 pounds; rolling stock, 1 locomotive and 25 cane cars.

MANUEL ANTÓN RECIO DE MORALES RAILWAY.

Situated near Real Campiña. Seven miles of standard-gauge road, leaving the Júcaro line, Cárdenas division of the U. H. R. R. at La Rosita and running to the Ciénaga de Zapata at Guanal Grande. Rolling stock, 50 cane cars. Locomotives obtained from the U. H. R. R.

CENTRAL MANUELITA RAILWAY.

Situated near Palmira. Eighteen and three-quarter miles of narrow-gauge road running from the sugar mill to various fincas and to the Damují River. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 4 locomotives, 1 cattle car, 10 flat cars, and 100 cane cars.

CENTRAL MARÍA ANTONIA RAILWAY.

Situated near Santo Domingo. A standard-gauge spur runs from the Cuban Central Railroad to the sugar mill. No rolling stock.

INGENIO NATIVIDAD RAILWAY.

Situated 20 miles south of Sancti Spiritus. Two and one-half miles of narrow-gauge tramway runs from the sugar mill to Estero San Marcos. Gauge, 28 inches; weight of rail, 12 to 15 pounds; rolling stock, 60 tram cars.

CENTRAL PARQUE ALTO RAILWAY.

Situated near Rodas. Twenty-nine miles of standard-gauge road owned by the Cuban Central Railroad. From the sugar mill a narrow-gauge track runs to various cane fields. No rolling stock. The cars used are owned by the various colonias and are drawn by oxen.

INGENIO PATRICIO RAILWAY (FORMERLY MARINA).

Situated near Encrucijada. Twenty-eight and one-half miles of narrow-guage road as follows: Eight and one-half miles from sugar mill to village of Santo; 2½ miles from sugar mill to wharf; 17½ miles from sugar mill to crossroads. Near the plantation La Palma the road is both standard and narrow gauge from La Palma to the point where the line joins the Cuban Central Railroad. Weight of rail, 30 pounds; rolling stock, 3 locomotives and 80 cane cars.

INGENIO PERSEVERANCIA RAILWAY.

Situated near Cienfuegos. Part of the road is standard gauge and part is narrow gauge. The standard-gauge portion is as follows: From the sugar mill to Pueblo Nuevo, crossing the U. H. R. R. and the Cuban Central Railroad; from the sugar mill to Santa Ana, Romero, Guasimas Pozo, Cercado, and La Caoba; from Amarillas on the U. H. R. R. to San Miguel and Caimito. The narrow-gauge portion runs from the sugar mill to "98," and from the sugar mill to Victoria, Cuba, Vencedora, and Carboneras. Gauge (narrow) 30 inches; weight of rail, (standard) 50 and 60 pounds, (narrow) 30 and 35 pounds; rolling stock, (standard) 125 cane cars, (narrow) 3 locomotives, 80 large and 90 small cane cars.

INGENIO PORTUGALETE RAILWAY.

Situated near Palmira. Eight and one-eighth miles of narrow-gauge road from the sugar mill to the Cuban Central Railroad. Gauge, 30 inches; rolling stock, 2 locomotives and 70 cane cars. There is also a standard-gauge spur running from the sugar mill to the Cuban Central Railroad.

INGENIO PURIO RAILWAY.

Situated near Calabazar. A narrow-gauge road. Three miles from the sugar mill to Calabazar; 8 miles from the sugar mill to Granadillo; 1 mile from Calabazar to Oriente; 3 miles from the sugar mill to Caracas; 4 miles from the sugar mill to Manuelita. Weight of rail, about 30 pounds; rolling stock, 3 locomotives and 80 cane cars.

INGENIO RAMONA RAILWAY.

Situated near Rancho Veloz. Ten and five-eighths miles of narrow-gauge road running from the sugar mill to Salvadora. There are two branches, one of which runs to the boundary line between Progreso and Marocal and the other to the finca Ysabel. Gauge, 36 inches; weight of rail, about 35 pounds; rolling stock, 2 locomotives, 1 armored car, 7 flat cars, and 46 cane cars.

CENTRAL REFORMA RAILWAY.

Situated near Rojas. Two and one-half miles of narrow-gauge road from the sugar mill to Rojas, at which point it connects with the narrow-gauge branch of the Cuban Central Railroad. There is also one-quarter mile of standard-gauge road from the sugar mill to the Cuban Central Railroad, and five miles from the Cuban Central Railroad to the finca Loyola. Gauge, (narrow) 36 inches; weight of rail, (standard) 60 pounds, (narrow) 35 pounds; rolling stock, (standard) 1 locomotive and 6 flat cars, (narrow) 1 locomotive and 34 flat cars.

CENTRAL RESULTA RAILWAY.

Situated near Sagua la Grande. Thirty-two and one-half miles of narrow-gauge road running from the barrio Gral. Nodarse to Calabazar. Gauge, 32 inches; weight of rail, 30 and 40 pounds; rolling stock, 6 locomotives and 130 cane cars.

CENTRAL ROSALIA RAILWAY.

Situated near Taguayabon. Four and three-eighths miles of narrow-gauge road. There are two side tracks, one at Guadalupe and one at Bajada. Gauge, 36 inches; weight of rail, 50 pounds; rolling stock, 2 locomotives and 30 cane cars.

ROSA MARÍA RAILWAY.

Situated near Mayajigua. Four miles of narrow-gauge road running from Rosa María to Estero Real on the coast. Rolling stock, 2 flat cars drawn by oxen.

CENTRAL SAN AGUSTÍN RAILWAY.

Situated near Remedios. Seven miles of narrow-gauge road running from K. 19, on the narrow-gauge branch of the Cuban Central Railroad, to the sugar mill and from that point southeast to the finca Mujica. Gauge, 36 inches; weight of rail, 45 to 50 pounds; rolling stock, 2 locomotives and 101 flat cane cars.

CENTRAL SAN AGUSTÍN RAILWAY.

Situated near Las Lajas. Thirty-one and one-quarter miles of narrow-gauge and 3⅛ miles of standard-gauge road running from the sugar mill to the finca Candelaria. Connects with the lines of the central Lequeitio. Gauge, 30 inches; weight of rail, 30 to 45 pounds; rolling stock, 5 locomotives, 2 passenger cars, 140 large cane cars, and 180 small cane cars.

INGENIO SAN ANTÓN DE LA UNIÓN RAILWAY.

Situated near Santa Clara. Two and four-fifths miles of narrow-gauge road, running from the Cuba Company Railroad to the sugar mill. Gauge, 36 inches; weight of rail, 60 pounds. The rolling stock for use on this portion of the road is furnished by the Cuba Company Railroad, but the estate owns 10 freight cars. There is also 2 miles of narrow-gauge portable railway running from the sugar mill to the cane fields. Gauge, 30 inches; rolling stock, 1 locomotive and 8 cane cars.

CENTRAL SAN FRANCISCO RAILWAY.

Situated near Cruces. Two branches of a total length of 9⅜ miles, running from the sugar mill to Mercedes and to the finca Mijalito. Gauge, 30 inches; weight of rails, 60 pounds; rolling stock, 2 locomotives and 96 cars.

There is also 2 miles of standard gauge road connecting with the Cuban Central Railroad.

INGENIO SAN FRANCISCO RAILWAY.

Situated near Quemado de Güines. Two miles of narrow-gauge road from the sugar mill to the cane fields. Gauge, 30 inches; weight of rail, 25 to 30 pounds; rolling stock, 1 locomotive and 35 cane cars.

INGENIO SAN JOSÉ RAILWAY.

Situated near Santo Domingo. Twenty-eight and one-eighth miles of standard-gauge and 3¾ miles of narrow-gauge road. The standard-gauge road runs from the sugar mill and connects with the Cuban Central Railroad. The narrow-gauge portion runs from the sugar mill through the cane fields to the colonias Melilla, La Sierra, and Santa Elena. Rolling stock (standard), 6 locomotives and 62 cane cars, (narrow), 1 locomotive and 60 cane cars.

INGENIO SAN JOSÉ RAILWAY.

Situated near Placetas. Two and one-half miles of narrow-gauge road, running from the Cuban Central Railroad to the sugar mill and from that point southeast to San Felipe. Gauge, 36 inches; weight of rail, 40 pounds; rolling stock, 1 locomotive and 22 flat cars.

INGENIO SAN LINO RAILWAY.

Situated near Rodas. Five miles of narrow-gauge road, connecting with the Rodas branch of the Cuban Central Railroad. There are three branches; one runs north, one east, and one west. Gauge, 30 inches; weight of rail, 35 pounds; rolling stock, 4 locomotives and 120 cane cars.

INGENIO SAN PABLO RAILWAY.

Situated near Calabazar. Two and one-half miles of narrow-gauge road, starting at kilometer 24 of the Placetas-Caibarién branch of the Cuban Central Railroad and running to the sugar mill. It is the property of the Cuban Central Railroad. No rolling stock.

INGENIO SAN PEDRO RAILWAY.

Situated near Rancho Veloz. A narrow-gauge road running from the sugar mill to the cane fields. Gauge, 30 inches; weight of rail, 20 to 35 pounds; rolling stock, 2 locomotives and 50 cane cars.

INGENIO SANTA LUTGARDA RAILWAY.

Situated near Calabazar. Five-eighths of a mile of standard-guage road from kilometer 46 of the railroad from Sagua to Camajuaní to the sugar mill. Rolling stock, 10 cars. There is also about 200 yards of tramway near the sugar mill.

CENTRAL SANTA MARÍA RAILWAY.

Situated near Ranchuelo. Two miles of standard-gauge road. No rolling stock.

INGENIO SANTA ROSA RAILWAY.

Situated near Ranchuelo. A short spur of the Cuban Central Railroad runs to the sugar mill. No rolling stock.

SANTA TERESA SUGAR COMPANY RAILWAY.

Situated near Citiecito. Thirteen and three-fourths miles of narrow-gauge road. There is one branch 6¼ miles long running to colonia Capitolo and another 6⅛ miles long running to Armonia Nuevo. The latter branch connects with the Resulta Railway. The line also connects with the narrow-gauge branch of the Cuban Central Railroad. Gauge, 30 inches; weight of rail, 35 to 40 pounds; rolling stock, 3 locomotives and 140 platform and box cars.

CENTRAL EL SALVADOR RAILWAY.

Situated near Quemado de Güines. Eleven and seven-eighths miles of narrow-gauge road. Gauge, 28 inches and 36 inches; rolling stock, 3 locomotives and 95 cane cars.

CENTRAL SANTÍSIMA TRINIDAD RAILWAY.

Situated near Santa Isabel de las Lajas. About 11½ miles of narrow-gauge road, running from the sugar mill into the cane fields. A standard-gauge siding, 1½ miles long, runs from the Cuban Central Railroad to the narrow-gauge road. Gauge, 29 inches; weight of rail, 35 pounds; rolling stock, 4 locomotives and 50 small and 125 large cane cars.

CENTRAL SOLEDAD RAILWAY.

Situated near Cienfuegos. Twenty-three miles of narrow-gauge road, running from the sugar mill to the plantation Limones. Gauge, 30 inches; weight of rails, 20 to 40 pounds; rolling stock, 5 locomotives, 2 passenger cars, and 140 flat cars.

CENTRAL TRINIDAD RAILWAY.

Situated near Trinidad. Six and three-fourths miles of narrow-gauge road, running from the sugar mill to the finca Algaba. There are two small branches. Gauge, 36 inches; weight of rail, 30 pounds; rolling stock, 2 locomotives, five 8-ton flat cars, and ninety 10-ton cane cars.

CENTRAL TUINUCÚ RAILWAY.

Situated near Sancti Spiritus. A standard-gauge spur of the Cuba Company Railroad, three-fourths of a mile long, runs to the sugar mill. The estate owns 5 cane cars, and all other rolling stock used is obtained from the Cuba Company Railroad.

INGENIO UNIDAD RAILWAY.

Situated near Cifuentes. A spur of the Cuban Central Railroad; runs from kilometer 41 to the sugar mill. Rolling stock, 2 locomotives, 5 box cars, and 60 cane cars.

CENTRAL VICTORIA RAILWAY.

Situated near Yaguajay. Thirty-one and seven-eighths miles of narrow-gauge road. The line runs from the sugar mill to Playa de Victoria on the north coast, and there are various branches running to the cane fields. Connection is made with the Yaguajay and Narcisa Railroads. Gauge, 27½ inches; weight of rail, 40 pounds; rolling stock, 6 locomotives, 10 flat cars, 12 freight cars, and 240 flat cane cars.

MAQUINA-SUPLIAL-COCHINAS RAILWAY.

About 1½ miles long. Gauge, 30 inches; no rolling stock.

INGENIO ZAZA RAILWAY.

Situated near Placetas. Narrow-gauge spur, 1½ miles long, runs from the Cuban Central Railroad to the sugar mill. Rolling stock, 1 locomotive, no cars.

CAMAGÜEY PROVINCE.

INGENIO ALTA GRACIA RAILWAY.

Situated near Camagüey. Four miles of narrow-gauge road. Gauge, 40 inches; rolling stock, 1 locomotive.

BAGÁ-SAN MIGUEL RAILWAY.

Six miles of narrow-gauge tramway, running from Bagá, on Nuevitas Bay, to San Miguel. Gauge, 4 feet 9½ inches; weight of rail, 60 pounds; rolling stock, 2 platform cars. Oxen used.

CENTRAL FRANCISCO RAILWAY.

Situated near Santa Cruz del Sur. Ten miles of standard-gauge track, running from the sugar mill to the wharf at Francisco de Guayabal. Weight of rail, 45 to 60 pounds; rolling stock, 4 locomotives, 8 box cars, and 120 cane cars.

INGENIO GUAYABAL RAILWAY.

Situated near Santa Cruz. About twelve miles of road.

INGENIO LUGAREÑO RAILWAY.

Situated near Nuevitas. Twelve and one-half miles of narrow-gauge road. Gauge, 30 inches; weight of rail, 30 pounds; rolling stock, 4 locomotives and 180 cane cars.

CENTRAL SENADO RAILWAY.

Situated near Nuevitas. Eighteen and three-fourths miles of narrow-gauge road, running from Las Minas, the terminus of the Puerto Principe and Nuevitas Railroad, to the cane fields. Gauge, 30 inches; weight of rail, 40 pounds; rolling stock, 8 locomotives, 20 box cars, and 330 cane cars.

ORIENTE PROVINCE.

BANES–TACAJO RAILWAY.

Situated near Banes Bay. Fifteen miles of narrow-gauge road, running northeast from Delite to Cuatro Varades, at which point it joins the road of the central Boston. A branch runs southeast from Delite to the sugar mill on the Tacajo Railway. Rolling stock, 1 locomotive and 20 cane cars.

CENTRAL BOSTON RAILWAY.

Situated at Punta Macabi on Banes Bay. Sixty-four miles of narrow-gauge road running from the sugar mill through Banes to Cañada Honda. There is a branch from Cuatro Varades to Vequitas, one to Dougall, and one to Las Angeles. There is also a branch running south from Banes to the wharf at Embarcadero. Line connects with the Cuba Company Railroad at Entronque de Dumois. Gauge, 36 inches; weight of rail, 40 pounds; rolling stock, one 6-ton donkey engine, one 8-ton shunting engine, two 13-ton engines, one 26-ton engine, five 30-ton engines, four 38-ton engines, 630 steel flat cars, 40 steel box cars, 60 flat cars with steel trucks, 6 tank cars, and 2 wrecking trains.

CENTRAL LOS CAÑOS RAILWAY.

Situated about 8 miles south of Guantánamo. Thirteen and one-half miles of narrow-gauge road running from the sugar mill to its shipping point on the coast. Gauge, 30 inches; weight of rail, 36 pounds; rolling stock, 2 locomotives and 120 cane cars. There is also 3½ miles of standard-gauge road connecting the narrow-gauge road with the Guantánamo Railroad.

CAPE CRUZ COMPANY RAILWAY.

Situated near Ensenada de Mora. Eight and one-quarter miles of narrow-gauge road made up of a main line and one branch. The main line runs from the wharf to the sugar mill and from that point to Dos Bocas. The branch runs to Rincon. Gauge, 30 inches; weight of rail, 40 pounds; rolling stock, 2 locomotives and 90 cane cars.

CENTRAL CHAPARRA RAILWAY.

Situated at Nipe Bay. Seventy-eight and one-half miles of narrow-gauge road. The following are the main parts: A line 8 miles long runs to San Manuel and connects with the San Manuel Railway; a line 3½ miles long from the sugar mill to Cascarero wharf on Puerto Padre Bay; a line 12 miles long from the sugar mill to Velasco and connecting with the Iberia branch of the Gibara-Holguín Railroad; a line 7 miles long to El Trompo; a branch 4 miles long through La Yaya; numerous branches in the cane fields. Gauge, 36 inches; weight of rail, 45 pounds; rolling stock, 10 locomotives, 10 box cars, 100 flat cars, 475 cane cars, and 16 hand cars.

EL COBRE MINES COMPANY RAILWAY.

Situated near Santiago de Cuba. Eight and one-quarter miles of narrow-gauge road, running from El Cobre to the wharf at Punta de Sal on Santiago Bay. Gauge, 48 inches; weight of rail, 35 pounds; rolling stock, 5 locomotives, 2 passenger cars, and 67 ore cars.

CENTRAL CONFLUENTE RAILWAY.

Situated near Guantánamo. Eight and one-half miles of narrow-gauge road running from the sugar mill to the seacoast. Gauge, 33 inches; weight of rail, 20 pounds; rolling stock, one 22-ton and two 11-ton locomotives and 120 cars.

DAIQUIRÍ MINES RAILWAY.

Situated near Daiquirí. A standard-gauge road, 5 miles long, runs from the wharf at Daiquirí to the foot of the incline at the Province mine. Weight of rail, 60 pounds; rolling stock, 3 locomotives, 74 hopper-bottom ore cars, 2 steam derricks, and 4 flat cars. At a point 2 miles from the coast a narrow-gauge road connects the standard-gauge road with the Berraco mines. Gauge, 36 inches; weight of rail, 50 pounds; rolling stock, three 20-ton locomotives, 40 ore cars, and 4 flat cars.

CENTRAL DOS AMIGOS RAILWAY.

Situated near Manzanillo. One-third mile of standard-gauge road from the sugar mill to the wharf at Campechuela. Gauge, 56 inches; weight of rail, 60 pounds; rolling stock, 4 flat cars, no locomotive.

CENTRAL ESPERANZA RAILWAY.

Situated 5 miles north of Guantánamo. Fourteen miles of narrow-gauge road running from the sugar mill into the cane fields. Gauge, 39.4 inches; weight of rail, 35 pounds; rolling stock, two 20-ton locomotives and 50 cars.

INGENIO HATILLO RAILWAY.

Situated 7 miles west of San Luis. One and one-half miles of narrow-gauge road running from the sugar mill to

Paraíso. Gauge, 30 inches; weight of rail, 25 pounds; rolling stock, 1 locomotive and 12 large and 58 small cars.

CENTRAL ISABEL RAILWAY.

Situated near Media Luna. Ten and one-half miles of narrow-gauge road running from the sugar mill to the wharf. There are two branches; one runs to Guayos, and the other to Colorado. Gauge, 36 inches; weight of rail, 60 pounds; rolling stock, 4 locomotives.

INGENIO ISABEL RAILWAY.

Situated near Guantánamo. The Guantánamo Railroad passes by this sugar mill and has sidings which are used by the mill.

JURAGUÁ IRON COMPANY RAILWAY.

Situated near Santiago de Cuba. Thirteen and one-half miles of narrow-gauge road, running from the Juraguá mines to La Cruz wharf on Santiago Bay. Gauge, 36 inches; weight of rail, 56 pounds; rolling stock, 13 locomotives, 2 derricks, 3 box cars, 12 flat cars, and 1,110 hopper-bottom ore cars.

CENTRAL PRESTON RAILWAY.

Situated near Nipe Bay. Twenty-five miles of standard-gauge road, running from the sugar mill to a wharf at Punta Tabaco and west to Río Nipe and having a branch to Guero. Weight of rail, 60 pounds; rolling stock, eight 60-ton and one 20-ton locomotive, 1 derrick car, and 225 flat cars.

CENTRAL SAN ANTONIO RAILWAY.

Situated 11 miles northeast of Guantánamo. Six and one quarter miles of narrow-gauge road, running from the sugar mill to the cane fields. Gauge, 36 inches; rolling stock, two 30-ton locomotives, twenty 20-ton cars, thirty 16-ton cars, and thirty-three 10-ton cars.

INGENIO SAN CARLOS RAILWAY.

Situated 3 miles east of Guantánamo. Three and one-half miles of standard-gauge road. At the sugar mill it connects with a branch of the Guantánamo Railroad, running from the finca San Vicente to the colonia Río Seco. No rolling stock.

CENTRAL SAN MIGUEL RAILWAY.

Situated 5 miles north of Guantánamo. Seven miles of narrow-gauge road, running from the sugar mill to the cane fields. Gauge, 31 inches; weight of rail, 30 pounds; rolling stock, 2 small locomotives and 30 cane cars.

INGENIO SAN RAMÓN RAILWAY.

Situated near Manzanillo. Seven and one-half miles of narrow-gauge road, running from the sugar mill to the wharf and from the sugar mill into the cane fields. Gauge, 36 inches; weight of rail, 40 pounds; rolling stock, 2 locomotives and 61 cane cars.

INGENIO SANTA ANA RAILWAY.

Situated 5½ miles north of San Luis. Standard-gauge spur one-half mile long, runs from Cuba Company Railroad to the sugar mill. No rolling stock.

CENTRAL SANTA CECELIA RAILWAY.

Situated 4 miles east of Guantánamo. Seven and one-half miles of narrow-gauge track. Cars pulled by oxen. Gauge, 28 inches; weight of rail, about 40 pounds; rolling stock, 22 wooden and 43 steel cars.

SANTA LUCÍA SUGAR COMPANY RAILWAY.

Situated between Gibara and Banes. Thirty-six and one-half miles of narrow-gauge road. One line of the road runs from the sugar mill to Samá and has a small branch. There are also branches to Mineros, to Caridad, and to the wharf at Vita. Gauge, 30 inches; weight of rail, 45 pounds; rolling stock, 5 locomotives, 12 box cars, 4 tank cars, and 180 flat cars.

CENTRAL SANTA MARÍA RAILWAY.

Situated about 1½ miles northwest of Guantánamo. Seven and one-half miles of narrow-gauge and 1 mile of standard-gauge road. In bad condition. Rolling stock, 10 standard-gauge cars and 60 narrow-gauge cars. No locomotives.

SIMON FRUIT COMPANY RAILWAY.

Situated at Cayo Mambí on Sagua de Tánamo Bay. Four and one-half miles of narrow-gauge road running from Cayo Mambí to the banana fields and to a point on the Sagua River, 6 miles from Sagua. Gauge, 36 inches; weight of rail, 30 pounds; rolling stock, two 7-ton locomotives and 16 flat cars.

CENTRAL SOLEDAD RAILWAY.

Situated near Guantánamo. Fourteen and three-eighths miles of combination standard and narrow-gauge road and 5 miles of narrow-gauge road. There is 3¾ miles of track running to the finca San José and a branch 1⅞ miles long to Perseverancia. A short standard-gauge spur runs from Soledad on the Guantánamo Railroad to the sugar mill. Gauge, 36 inches; weight of rail, 30 pounds; rolling stock, one 20-ton locomotive and 63 cars (twenty 15-ton steel cars).

TACAJÓ COCOA AND SUGAR COMPANY RAILWAY.

Situated at Tacajó on Nipe Bay. Twelve and one-half miles of standard-gauge road, running from Tacajó to Entronque Dumois, where it joins the Cuba Company Railroad. Rolling stock, one 30-ton and one 50-ton locomotive. Cars of the Cuba Company Railroad are used.

TACAJÓ RAILWAY.

Situated near Banes Bay. Eighteen and one-half miles of standard and narrow gauge road, running from Punta Lengua, on Nipe Bay, to Naranjo Dulce. Road connects with the Cuba Company Railroad at Entronque Dumois. Rolling stock, 2 locomotives and 20 cars (narrow gauge).

CENTRAL TERESA RAILWAY.

Situated at Ceiba Hueca, near Manzanillo. Fourteen and three-eighths miles of narrow-gauge road, running from the wharf at Ceiba Hueca through the sugar mill and south into the cane fields near Los Muchachos. This village is on the Tana River. Gauge, 36 inches; weight of rail, 40 pounds; rolling stock, 4 locomotives and 100 cane cars.

INGENIO UNIÓN RAILWAY.

Situated 1½ miles northeast of San Luis. One and one-half miles of standard-gauge road, running from the Cuba Eastern Railroad to the sugar mill. Weight of rail, 60 pounds; rolling stock, 1 locomotive; no cars.

YUMURÍ CABLE ELEVATOR.

Situated near Baracoa. The cable elevator carries bananas from the high table land of Maisí to the mouth of the Yumurí River. In connection with the cable elevator there is a cable tramway, crossing the river and running down the east bank to the coast. The elevator works by gravity, and the tramway is driven by a steam engine of 8 horsepower and an auxiliary gas engine of 20 horsepower. Freight weighing 600 pounds can be carried on these cable lines.

ROADS AND TRAILS.

The Military Map of Cuba shows the roads as macadamized, passable by army wagons in the dry season, ox-cart roads, and trails.

Macadamized roads are being rapidly extended under a scheme drawn up by the provisional government.

During the dry season the passage of other roads by heavily loaded army wagons would be largely a question of judgment and experience.

During the rainy season many unbridged rivers, small streams, and arroyos become unfordable for days or weeks at a time.

It may be said in general that during the rainy season unimproved roads, with few exceptions, are not passable by heavily loaded army wagons.

During this season of the year pack transportation would have to be used in field operations.

In event of active operations any stations not on railroads or macadamized roads should be fully provisioned and supplied for the rainy season during the dry season.

It is to be especially noted that practically all of the hauling in Cuba is done with carts drawn by oxen. During the rainy season, when the ordinary country roads are soft, deep ruts are worn in the roads, and these ruts are about 7 feet apart. In addition to the above the oxen when moving along plant their feet in the holes made by the feet of oxen which have preceded them along the road, and this results in making the middle of the road a succession of holes which are but a short distance apart. When the road is in this condition horses and mules travel the road with extreme difficulty and frequently the fields on either side of the road must be used if any progress is to be expected.

TROCHAS.

During the war of 1895–1898 the Spaniards established two important trochas or barriers across the island. They were known as the Mariel-Artemisa-Majana trocha and the Júcaro-Morón trocha.

Full descriptions and surveyed plans are on file in the Second Section, General Staff.

SUGAR MILLS.

Owing to the great amount of land planted in sugar cane, and owing to the annual value of the crop and the fact that the cane is very inflammable from November to the time it is cut and ground, which is sometimes as late as May, it is considered advisable to incorporate a list of the principal ingenios and centrales, showing their name, location, and production. The production of a mill given below indicates the output of the mill at its last grinding. Some of the mills do not grind every year.

A detailed description of each mill and its properties is on file in the Second Section, General Staff.

PINAR DEL RÍO PROVINCE.

Término municipal.	Barrio.	Class.	Name.	Production.
				Sacks.
Artemisa	Dolores	Ingenio	El Pilar	50,000
Cabañas	Ceiba	Central	Bramales	13,000
Do	do	do	Orozco (San Luis)	27,000
Do	Carenero	do	América	8,000
Do	Bahía Honda	do	Girardo	(a)
Do	Pueblo	do	Mercedita	30,000
Do	San Miguel	do	Asunción	40,000
Guanajay	Macagual	do	San Ramón	24,000

a No record.

HAVANA PROVINCE.

Término municipal.	Barrio.	Class.	Name.	Production.
				Sacks.
Aguacate	Numero Cinco	Ingenio	Averhoff	20,000
Do	do	do	Rosario (Pelayo)	120,000
Batabanó	Taño	Central	Julia	75,000
Bauta	Banes	do	Lucía	30,000
Bejucal	Güiro Marrero	Ingenio	San Agustín	35,000
Güines	Charcas	Central	Mercedita	140,000
Do	Jobo	Ingenio	San Miguel (Jobo)	60,000
Do	Lechugas	do	San José	50,000
Do	Nombre de Dios	Central	Nombre de Dios	30,000
Do	do	do	Providencia	110,000
Do	Rubio	Ingenio	Amistad	75,000
Jaruco	San Antonio Río Blanco.	Central	Lotería	25,000
Do	do	do	Nuestra Señora del Carmen.	15,000
Madruga	Sabana de Robles	Ingenio	San Antonio	35,000
Do	do	Central	Santa Rita	40,000
Marianao	Playa	do	Quijano	25,000
Do	Quemados	do	Toledo	80,000
Nueva Paz	Bagaez	do	Nueva Paz	55,000
Do	Caimito	do	Gómez Mena	100,000
Do	Navarra	do	Santísima Trinidad (Trinidad) (Josefita).	60,000
San Antonio de los Baños.	Chicharo	do	San José (Fajardo)	26,000
San José de las Lajas.	Portugalete	do	Portugalete	20,000

MATANZAS PROVINCE.

Alacranes	Estante	Central	Conchita	140,000
Do	do	Ingenio	Las Cañas	(a)
Do	Villa	Central	Valiente	35,000
Bolondrón	Lucía	Ingenio	San Rafael	60,000
Do	Manuel Álvarez	do	Flora	40,000
Do	Río de Auras	do	Saratoga	18,000
Do	Tienda Nueva	do	Armonía	35,000
Do	do	do	Feliz	65,000
Do	do	do	Jicarita	20,000
Cárdenas	Varadero - Camacho - Guásimas.	do	Preciosa	25,000
Do	Lagunillas	do	Progreso	25,000
Do	Varadero - Camacho - Guásimas.	do	Dos Rosas	9,000
Colón	Agramonte	Central	Unión	65,000
Do	Altamisal	do	España	90,000
Do	Arabos	do	Occitania	30,000
Do	Banagüises	do	Álava	150,000
Do	Manguito	do	Esperanza	60,000
Do	Calimete	do	Por Fuerza	20,000
Do	Caobillas	do	Santa Rita	55,000
Do	Los Arabos	do	Aguedita	22,000
Do	Manguito	do	Araujo (Nena)	25,000
Do	do	do	Mercedes	70,000
Do	Altamisal	do	Tinguaro	80,000
Do	Roque	Ingenio	Reglita	65,000
Do	Macagua	do	Dulce Nombre	18,000
Jagüey Grande	López	do	Australia	25,000
Do	Jabaco	do	San Ignacio (Asturia)	65,000
Jovellanos	Toscano	Central	San Vicente	20,000
Do	Asunción	do	Soledad	40,000
Do	do	do	Victoria	25,000
Do	Carlos Rojas	do	Olimpo	60,000
Do	Coliseo	do	Santa Amalia	40,000
Do	Isabel	Ingenio	Elizalde	(a)
Do	Coliseo	Central	Carolina	40,000

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[a] No record.

MATANZAS PROVINCE—Continued.

Término municipal.	Barrio.	Class.	Name.	Production.
				Sacks.
Martí	Altamisal	Ingenio	Angelita	34,000
Do	do	Central	Algorta (Alcorta) (San Nicolás del Algorta).	25,000
Do	Martí	Ingenio	Guipúzcoa	35,000
Do	Máximo Gómez	do	Santa Catalina	60,000
Do	Motembo	Central	Santa Gertrudis	120,000
Matanzas	Canasí	do	Puerto	18,000
Do	Caobas	do	Limones	30,000
Do	Canasí	do	San Juan Bautista	20,000
Do	Ceiba Mocha	do	Elena	11,000
Do	Guamacaro	Ingenio	Triunfo (La Julia)	12,000
Do	Santa Ana	Central	Porvenir (Los Angeles)	20,000
Do	do	do	Jesús María	10,000
Do	do	do	San Cayetano	25,000
Do	do	do	Triunvirato	40,000
Pedro Betancourt	Cabecera	do	Santa Catalina	26,000
Do	Navajas	do	Carmen	45,000
Do	do	do	Santa Filomena (Enriqueta).	90,000
Do	Platanal	do	Nueva Luisa	80,000
Do	do	Ingenio	Dolores	50,000
Do	Tramojos	Central	Socorro	138,000
Unión de Reyes	Iglesia	Ingenio	San Gonzalo (Majagua)	25,000
Do	do	do	Santo Domingo	65,000
Do	Sabanilla	Central	Luisa (Condesa)	15,000

SANTA CLARA PROVINCE.

Caibarién	Cuarto	Central	Reforma	60,000
Calabazar	Centro	do	Purio	30,000
Do	Encrucijada	do	Constancia	75,000
Do	Mata	do	Macagua	12,000
Do	do	do	Santa Lutgarda	30,000
Do	Santo	do	Patricio	36,000
Do	Sitio Grande	do	Unidad	60,000
Camajuaní	Guadalupe	Ingenio	Julia	10,000
Do	do	Central	Altamira	24,000
Do	Salamanca	do	Fé	60,000
Cienfuegos	Aguada de Pasajeros	do	Aguada	40,000
Do	do	Ingenio	Indio	4,500
Do	Castillo de Jagua	Central	Juraguá	60,000
Do	Convento	do	Covadonga	80,000
Do	Guaos	do	Soledad	80,000
Do	Manacas	do	Nuestra Señora de Regla.	10,500
Do	Real Campiña	do	Perseverancia	100,000
Cruces	Monte Cristi	do	Andreíta	150,000
Do	Marta Abreu	do	Dos Hermanos	60,000
Do	do	do	San Francisco	50,000
Do	do	do	Santa Catalina	35,000
Palmira	Arango	Ingenio	Carolina	10,000
Do	do	Central	Dos Hermanos	25,000
Do	do	do	Manuelita	50,000
Do	Ciego Alonso	do	Hormiguero	115,000
Do	Escarza	do	Portugalete	45,000
Placetas	Placetas	Ingenio	Zaza	70,000
Do	San Andrés	Central	Fidencia	45,000
Do	do	do	San José	30,000
Quemado de Güines	Carahatas	Ingenio	San Francisco	13,000
Do	Güines	do	Esperanza	17,500
Do	Paso Cavado	do	Resolución (Campo Florido).	12,000
Do	Poblado	do	San Isidro	10,000
Do	San Valentín	do	El Salvador	25,000
Do	Zambumbia	do	Jesús Alfonso	20,000
Rancho Veloz	Santa Clara	Central	Ramona	16,000
Do	Crimea	Ingenio	Esperanza	6,000
Do	Guanillas	Central	San Pedro	34,000
Do	Pozas	Ingenio	Caridad	24,000
Do	Sabana Grande	Central	Luisa y Antonia	8,000
Do	Sierra Morena	Ingenio	Santa Lutgarda	15,000

SANTA CLARA PROVINCE—Continued.

Término municipal.	Barrio.	Class.	Name.	Production.
				Sacks.
Ranchuelo	Bernia	Central	Pastora	35,000
Do	Poza de la China	do	Santa María	40,000
Do	Sitio Viejo	do	Santa Rosa	52,000
Remedios	Buena Vista	do	Adela	60,000
Do	do	Ingenio	San Agustín	50,000
Do	Zulueta	do	San Pablo	20,000
Do	Carolina	Central	Rosalia	22,000
Do	Vega Alta	do	Carmita	20,000
Rodas	Abreus	do	Constancia	75,000
Do	do	do	Cieneguita	40,000
Do	Cartagena	do	Lequeitio	50,000
Do	Congojas	do	Parque Alto	50,000
Do	Medidas	do	San Lino	30,000
Sagua la Grande	Sitiecito	do	Resulta	32,000
Do	Alacrán	do	Corazón de Jesús (Flor de Sagua).	12,000
Do	Sitiecito	do	Santa Teresa	99,000
Sancti Spiritus	Banao	Ingenio	Pojabo	(a)
Do	Guásimal	do	Natividad	18,000
Do	Guayos	Central	Tuinucú	80,000
Santa Clara	Baez	Ingenio	Bagá	15,000
Do	Ceibabo	Central	San Cristóbal(Cardosa)	10,000
Do	Egidos	do	San Antonio	35,000
Santa Isabel de las Lajas.	Salado	do	Santísima Trinidad (Trinidad).	50,000
Do	Nuevas	do	Caracas	170,000
Do	Terry	do	San Agustín	50,000
Santo Domingo	Manacas	do	San José	90,000
Do	do	do	Gratitud	20,000
Do	Río	do	María Antonia	25,000
Trinidad	Rió de Ay	do	Trinidad	65,000
Yaguajay	Ceibabo	do	Santa Catalina (Betoño) (Carbo).	(a)
Do	Yaguajay	do	Victoria	70,000
Do	do	do	Narcisa	75,000

CAMAGÜEY PROVINCE.

Camagüey	Altagracia	Ingenio	Dos Marías	(b)
Ciego de Avila	Ciego de Avila	Central	Stuart Sugar Co. (Silveira).	150,000
Do	do	do	Jagüeyal	10,000
Do	Jatibonico del Sur	Ingenio	Jatibonico	115,000
Nuevitas	Lugareño	Central	Lugareño	60,000
Do	Senado	do	Senado	80,000
Sta. Cruz del Sur	Guayabal	do	Francisco	90,000

ORIENTE PROVINCE.

Alto Songo	Morón	Central	San Sebastián	16,000
Bayamo	Veguita	Ingenio	Sofía	15,000
Gibara	Banes	Central	Boston	260,000
Do	Santa Lucía	do	Santa Lucía	100,000
Guantánamo	Arroyo Hondo	Ingenio	Los Caños	26,534
Do	do	do	Santa Cecilia	75,000
Do	Caridad	do	Confluente	10,000
Do	Guaso	Central	Esperanza	48,000
Do	Jamaica	Ingenio	San Carlos	(a)
Do	do	do	Isabel	46,268
Do	do	do	San Miguel	20,000
Do	do	do	Santa María	25,000
Do	Lajas	do	Soledad	55,832
Do	Río Seco	do	San Antonio	40,000
Do	do	Central	Romelie	40,000

[a] No record.

[b] 30 hogsheads molasses.

ORIENTE PROVINCE—Continued.

Término municipal.	Barrio.	Class.	Name.	Production. Sacks.
Manzanillo	Calicito	Central	Tranquilidad	25,000
Do	do	do	Salvador (near Calicito).	12,000
Do	Campechuela	do	Dos Amigos	15,000
Do	do	do	San Ramón	50,000
Do	do	do	Teresa	65,000
Do	Media Luna	do	Isabel (Media Luna)	85,000
Do	Pilón	do	Cabo Cruz (Pilón)	70,000
Do	Niquero	do	Niquero	65,000
Mayarí	Mateo Sanchez	do	Preston	150,000
Palma Soriano	Lajas	Ingenio	Hatillo	12,000
Puerto Padre	Chaparra	Central	Chaparra	300,000
Do	San Manuel	Ingenio	San Manuel	62,000
San Luis	Monte Dos Leguas	do	Santa Ana	25,000
Do	San Luis	do	Unión	34,000

THE PROVINCES.

The Republic of Cuba is divided into six provinces, which from west to east are as follows:

Pinar del Río, Havana, Matanzas, Santa Clara, Camagüey, and Oriente.

The provinces are subdivided into 82 municipal districts, in the following proportion:

Pinar del Río, 12; Havana, 18; Matanzas, 10; Santa Clara, 21; Camagüey, 5; Oriente, 16.

Some of these, especially in the rural districts, are again subdivided into wards (barrios), the size, number, and population of which varies, the object being to aid municipal control by means of delegates known as alcaldes de barrio.

PROVINCE OF PINAR DEL RÍO.

TABLE OF DISTANCES, IN MILES, BETWEEN TOWNS IN THE PROVINCE OF PINAR DEL RÍO.

ARTEMISA.																						
35	BAHÍA HONDA.																					
20	20	CABAÑAS.																				
14	25	24	CANDELARIA.																			
8	30	18	21	CAYAJABOS.																		
71	46	66	51	72	CONSOLACIÓN DEL NORTE (LA PALMA).																	
60	67	64	45	66	19	CONSOLACIÓN DEL SUR.																
10	40	20	19	13	81	70	GUANAJAY.															
109	110	116	95	116	62	49	119	GUANE.														
14	47	27	28	23	85	74	7	123	GUAYABAL.													
127	129	134	113	134	81	67	137	18	141	MÁNTUA.												
17	29	15	30	13	85	75	7	126	14	147	MARIEL.											
41	52	50	27	48	37	20	51	68	55	87	57	PALACIOS.										
46	57	55	32	53	30	15	56	74	60	82	62	5	PASO REAL DE SAN DIEGO.									
74	71	75	60	81	27	14	84	35	88	53	155	34	30	PINAR DEL RÍO.								
24	20	34	8	29	41	37	34	86	38	105	32	20	24	63	SAN CRISTÓBAL.							
48	37	58	34	55	23	25	58	74	62	92	64	17	10	40	25	SAN DIEGO DE LOS BAÑOS.						
30	5	15	20	24	51	74	34	115	41	141	30	46	51	88	26	51	SAN DIEGO DE NUÑEZ.					
91	90	98	77	98	43	33	101	23	105	36	107	50	50	18	70	58	96	SAN JUAN Y MARTÍNEZ.				
94	91	99	74	95	43	33	104	30	108	43	104	43	47	18	63	58	89	8	SAN LUIS.			
31	27	41	17	38	34	23	41	72	45	100	47	13	18	47	7	17	33	71	65	SANTA CRUZ DE LOS PINOS.		
77	54	70	61	82	9	18	90	55	91	75	88	40	35	20	50	30	64	38	38	47	VIÑALES.	
40	73	53	54	49	111	100	33	119	26	167	40	81	86	114	64	88	67	131	134	71	117	HAVANA.

PROVINCE OF PINAR DEL RÍO.

LOCATION AND BOUNDARY.

The province of Pinar del Río is situated at the western extremity of the island of Cuba. It is bounded on the north by the Gulf of Mexico, on the east by the province of Havana, on the south by the Sea of the Antilles, and on the west by the Strait of Yucatán.

AREA AND POPULATION.

The area comprises 5,000 square miles; the length of the province is about 160 miles, the width about 50 miles.

The population of the province is 240,372, divided as follows: Native white, 68.7 per cent; foreign white, 6.4 per cent; colored, 24.9 per cent, or white, 75.1 per cent; colored, 24.9 per cent.

JUDICIAL AND MUNICIPAL DISTRICTS.

The province is divided into four judicial districts, Pinar del Río, San Cristóbal, Guanajay, and Guane. It is also divided into 12 municipal districts, or townships, namely: Artemisa, Cabañas, Consolación del Norte, Consolación del Sur, Guanajay, Guane, Mántua, Pinar Del Río, San Cristóbal, San Juan y Martínez, San Luis, Viñales.

PROVINCIAL GOVERNMENT.

There is a governor and a provincial council of eight members, elected by direct suffrage.

Each municipal district is presided over by a mayor, assisted by a municipal council.

CAPITAL AND PRINCIPAL TOWNS.

The capital of the province is Pinar del Río.

The most important towns are Guanajay, San Luis, Viñales, San Juan y Martínez, San Diego, Los Palacios, Cabañas, Bahía Honda, Mariel, etc.

GEOGRAPHY AND TOPOGRAPHY.

The northern and western portions of the province are mountainous, the coasts generally low and marshy. In the center of the province is the garden spot of the entire island, the "Vuelta Abajo," celebrated for its fertility.

This region is thickly populated, and the people more prosperous than elsewhere in all the island.

The largest ranges occupy the greater part of the western and northern sections of the province; the coasts are usually low and marshy; moor wastes, salty marshes, and shoals are common in the lowlands. There are no active volcanoes in the mountain ranges, but wonderful caves and subterranean cavities are characteristic.

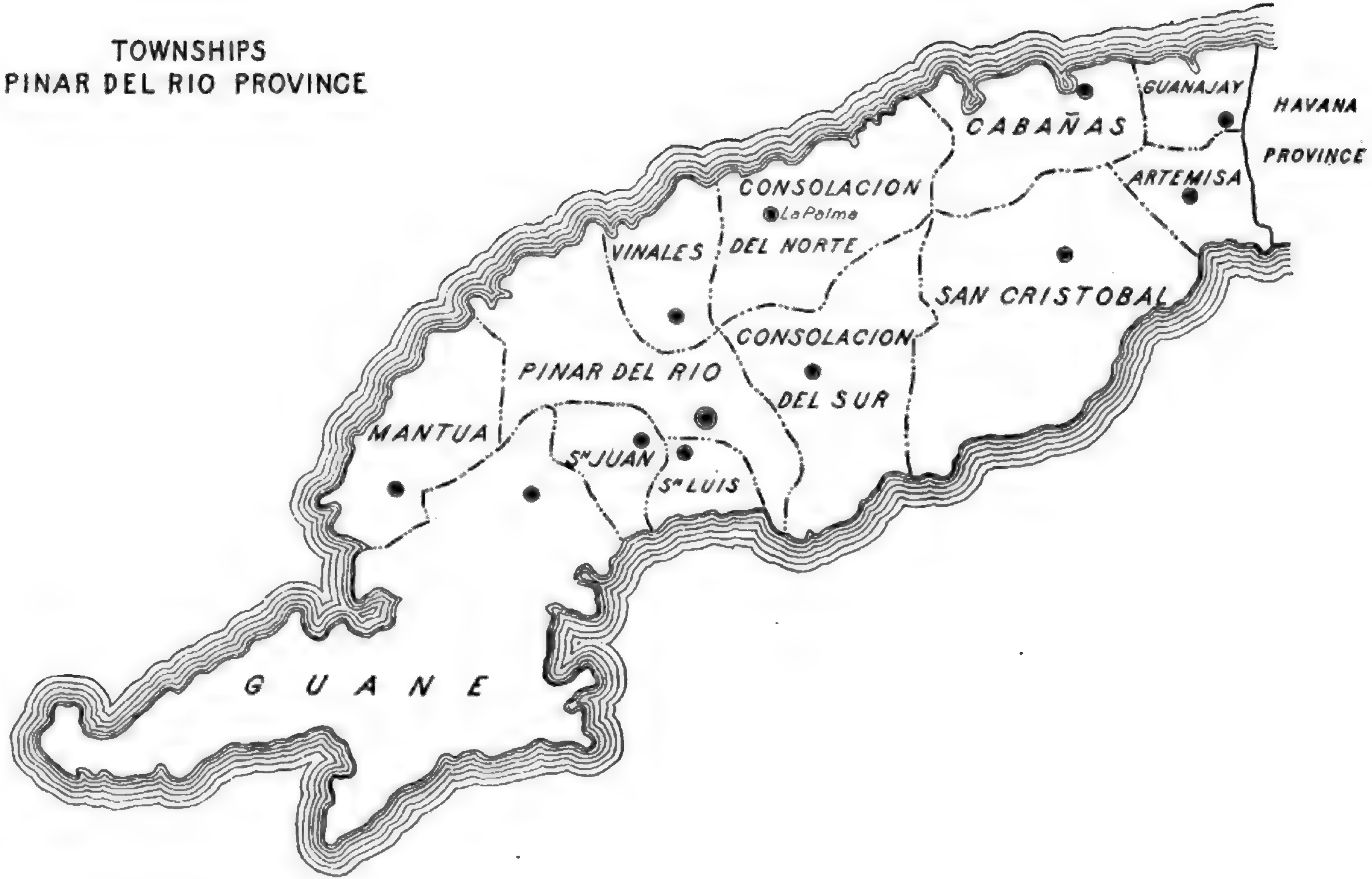
Rivers and lakes are numerous, although the lakes are usually insignificant. A few larger ones are formed by the tide; of these Guadiana, Lacato, Cortés, and Gato are the most important. Some canals form connecting links, such as Buenavista, Romadero, Cayo, Lebisa, and Alacranes in the north; Las Cayamas in the south.

The extensive archipelago of Guaneguanico borders the northwestern shore.

The province is dominated by the Sierra Organos.

The main sierra of this range lies just back from the north coast and extends from Mariel westward to the Ensenada Guadiana. West of this bay a line of lower mountains or hills forms the axis of the peninsula to Cape San Antonio, the western extremity of the island. The sierra is flanked by spurs and more or less isolated foothills and buttes. Southwest of Bahía Honda is the highest peak of the range, the Pan Guajaibon, whose altitude has been variously estimated to be from 1,920 to 2,560 feet. The former figures are probably more nearly correct. Between the city of Pinar del Río and Viñales the range is broken up into three parallel ridges.

TOWNSHIPS
PINAR DEL RIO PROVINCE



RIVERS.

The rivers are not long, but in the wet season of considerable volume; only a few of them are navigable. The main rivers west and north are the Guanes or Guadiana, Mántua, Buenavista, Malas Aguas, Rosario, Bahía Honda, Cabañas, Pan de Azúcar, Ortigosa, Guajaibón, and Baracoa.

The principal rivers on the south are the Cuyaguateje, Guamá, Herradura, Los Palacios, Hondo, San Juan y Martínez, San Diego or Caiguanabo, Bacunagua, Taco Taco, San Cristóbal, Bayate, San Sebastián, and Feo.

COAST LINE.

The outline of the coast is both high and bold, and low and marshy. Portions of it are sheltered by archipelagoes or screened by shoals, reefs, or islands, making navigation difficult. Where the coast is high there are fine harbors. The coasts are alternately intersected by cliffs and marshes.

AGRICULTURE, INDUSTRY, AND COMMERCE.

The principal products of the province are tobacco, sugar cane, coffee, timber, fruits, charcoal, and cattle.

The chief industry is the manufacture of tobacco, but there are some lumber interests.

Stock raising and fishing give occupation to many of the people.

Exports consist of manufactured tobacco, fine woods, and some fruits, and the imports are in general foodstuffs, petroleum, etc.

JUDICIAL DISTRICTS AND MUNICIPAL DISTRICTS.

Judicial district.	Township.
Guanajay	Artemisa.
	Cabañas.
	Guanajay.
Guane	Guane.
	Mántua.
Pinar del Río	Consolación del Norte.
	Consolación del Sur.
	Pinar del Río.
	San Juan y Martínez.
	San Luis.
	Viñales.
San Cristóbal	San Cristóbal.

JUDICIAL DISTRICT OF GUANAJAY.

Township:	Population.
Artemisa	14,719
Cabañas	11,552
Guanajay	15,336

TOWNSHIP OF ARTEMISA (CAPITAL, ARTEMISA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Artemisa	Artemisa	Rural and urban.		4,973
Cañas	Cañas	do	3½	1,490
	Capellanías	Rural	5½	543
Cayajabos	Cayajabos	Rural and urban.	8	1,088
	Dolores	Rural	2	2,270
	Guanimar	do	8⅛	191
	Mojanga	do	6¼	646
Pijirigua Mangas station. Las Mangas.	Pijirigua	Rural and urban.	4	781
	Pueblo Nuevo	Rural	7¾	214
Puerta de la Güira	Puerta de la Güira	Rural and urban.	3½	799
Punta Brava	Punta Brava	Rural	8	417
	San Juan	do	8	374
	Virtudes	do	3½	933

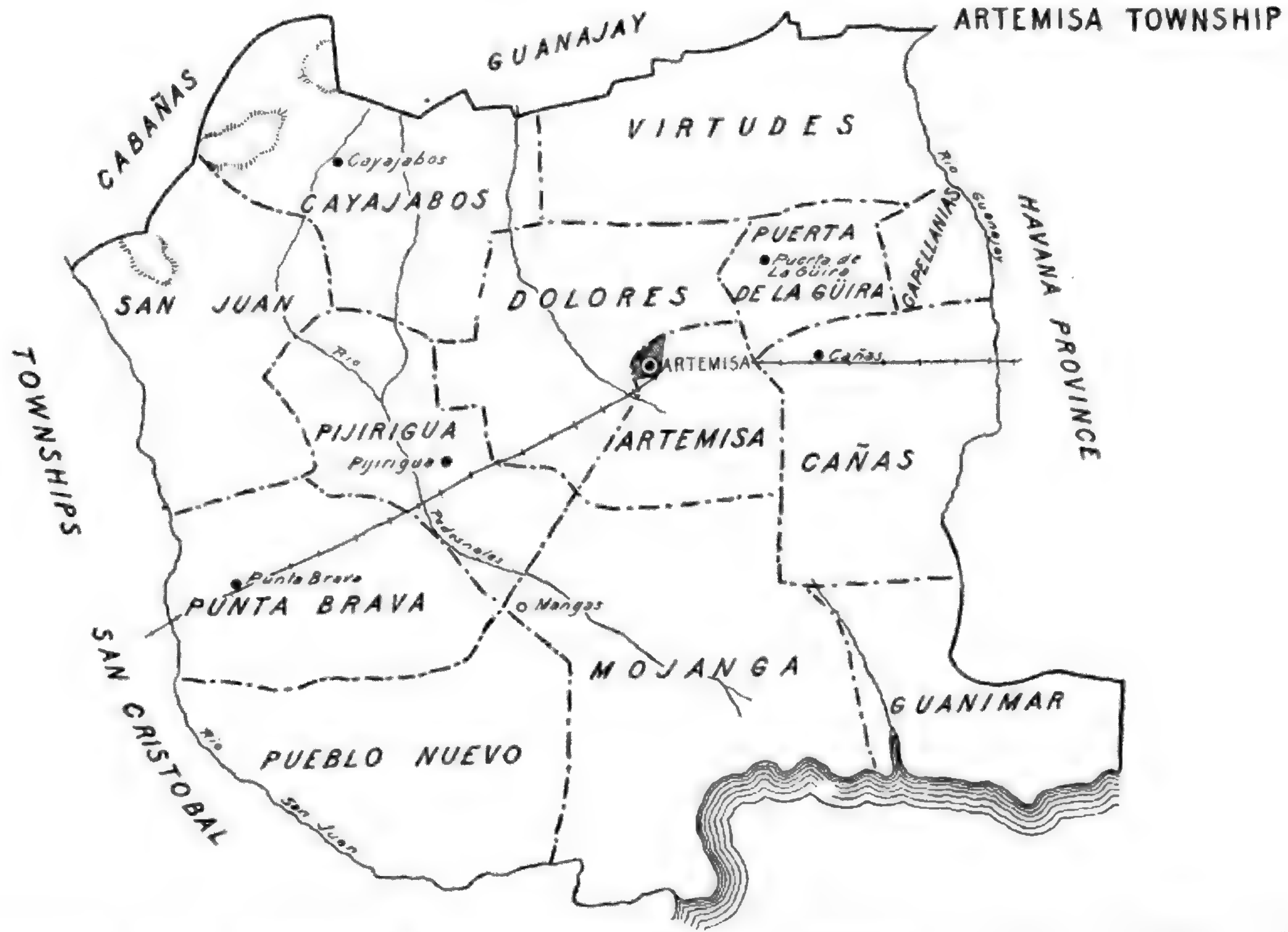
Artemisa.—Barrio and town. The town is situated on the Marianao-San Cristóbal calzada, 9½ miles southwest of the town of Guanajay, and surrounded by level, well-cultivated country. Houses nearly all one story; built for the most part of stone and cement.

Industries are confined to a few cigar factories, for local consumption, and a couple of blacksmith shops and carpenter shops.

The inhabitants are mostly employed in cultivating tobacco and pineapples.

Population, 3,831.

Water supply obtained from one large well situated on Cañas road, near railroad station, about 200 yards east of calzada; equipped with steam pump, which forces water into a large tank. Water is piped from there to the town, and the pressure is sufficient to reach half the area of the town. Another large well is situated in the courtyard of a house on the corner of calles General Gómez and General Díaz; it is equipped with a steam pump and tank. The water is transported in wagons and distributed to that portion of the town not otherwise supplied. Water is of good quality.


ARTEMISA TOWNSHIP
GUANAJAY
CABAÑAS
HAVANA PROVINCE
SAN CRISTOBAL TOWNSHIPS
VIRTUDES
CAYAJABOS
Cayajabos
SAN JUAN
DOLORES
PUERTA DE LA GÜIRA
Puerta de La Güira
CAPELLANIAS
Rio Guanajay
ARTEMISA
Cañas
CAÑAS
Rio
PIJIRIGUA
Pijirigua
Pedernales
Punta Brava
PUNTA BRAVA
Mangas
MOJANGA
GUANIMAR
PUEBLO NUEVO
Rio San Juan

No sewer system. Street corners are lighted by oil lamps.

Barracks: Two-story frame building on the corner of calle República and the calzada, sufficient for one company of infantry, including officers; new building; tile roof; sanitary condition good; small court in rear where kitchen could be constructed; vacant lot across the street where quartermaster corral could be located; water supplied by pipe from well on Cañas road; no water-closets. Another one-story stone building on the southwest corner of calle General Díaz, three blocks west of the calzada, sufficient for one company of infantry, with additional rooms for officers; sanitary condition good; building about 8 years old; no water-closets; no lighting facilities.

No stables.

No transportation corrals. A good location for one would be in the triangular vacant lot between the railroad, calzada, and the main road to the railroad station; water could be obtained from well on the Cañas road.

Those buildings recommended as barracks could be used as hospitals; also the Spanish Club building, which is a one-story stone building with tile roof, and would hold about 30 beds. Water piped from well on Cañas road; building in good condition; sanitary condition good; no water-closets.

Storehouses: Freight house at railroad station; one-story frame building, with iron roof; shipping platform about 10 feet wide by 3½ feet high; the building is about 30 by 80 feet; railroad siding on one side and a wagon road on the other.

A tobacco-curing house on the road between the railroad station and the town, about 50 yards from the railroad station. It is a two-story building (frame) about 30 by 60 feet; has no railroad siding.

A pineapple-packing house at the junction of the railroad and Cañas road; is a one-story building (frame), with tile roof; about 45 by 70 feet. It has an unloading platform about 8 feet wide by 3½ feet high; a railroad siding on one side and Cañas road on the other.

Railroad station is situated on dirt road running east from the calzada, 1 block from calle República (main street).

Post-office is situated on west side of square, half a block north of calle República, in the City Hall building. Telegraph office in same building with the post-office. No telephone central.

No camp sites available in the vicinity of Artemisa, as all land is cultivated.

No fortifications; most of the blockhouses have been destroyed, and remaining ones are of no military value.

The Western Railway of Havana has two sidings at railroad station, each about 400 yards long; facilities for entraining and detraining, loading and unloading supplies, consist of two sidings and the platform at the freight house already described.

Calzada running west to Cayajabos; calzada northeast to Guanajay; calzada southwest to Candelaria; dirt road east to Cañas; dirt road north to central Pilar.

Best line of approach for attack is from the north and northeast, as the underbrush and trees are thicker, and fewer stone houses are on that side of town.

Cañas.—Barrio and village. The barrio is east of and borders on Artemisa barrio. Within its boundaries are the fincas Santa Teresa, San José, Serafina, Ramos, La Papilla, Monserrate, Armonia, and Constancia. The village is situated on a dirt road 3½ miles east of Artemisa, and on the main line of the Western Railway of Havana.

Nearly all buildings are native shacks. Buildings on main street (continuation of Artemisa road) are of stone and cement; in very poor condition. No industries.

Population, about 200.

Water obtained from wells in the village; of good quality, but of limited quantity. There is a large well (with dummy engine) 1 mile east of village at finca Santa Teresa; water of good quality and sufficient for a battalion of troops.

No buildings suitable for troops.

No stables.

No transportation corrals. A corral could be located at finca Teresa, 1 mile east; plenty of open ground; water obtained from well.

No hospitals or buildings suitable for hospitals.

Post-office is situated on corner of Artemisa road and street leading to the railroad station. Telegraph office at railroad station.

Good site for a camp of a regiment of infantry at finca Santa Teresa, 1 mile east of Cañas; open level ground; water of good quality and abundant; pumped from well by dummy engine; wood plentiful; grazing good.

The Western Railway of Havana has one siding about 200 yards long; no unloading platforms or other facilities for entraining or detraining.

Dirt road west to Artemisa; dirt road north to Guanajay; dirt road east to Alquízar and San Antonio de los Baños; dirt road south to south coast.

Best line of approach in case village were defended is from the north and west.

Capellanías.—Barrio. A district northeast of Artemisa and adjoining Puerta de la Güira barrio. Fincas bearing names Angelí, El Brujo, La Isabela, Morejón, and Valdespino are within its boundaries. There is no point bearing the name.

Cayajabos.—Barrio and village. The barrio is northwest of Artemisa. Within its boundaries are the fincas San Ignacio, San Francisco, Angerona, Charco, Azul, Desquite, La Pomona, Esperanza, and Jesús María.

The village is situated in the foothills of a range of mountains, about 8 miles northwest of Artemisa, and connected with Artemisa by calzada. Ruins of old town on all sides. Nearly all the houses now in use are native shacks, with a few frame buildings. There are no industries.

Population, about 200.

Water obtained from small stream just south of the village; water of good quality and abundant.

No buildings suitable for quartering more than 20 men; these houses are mostly native shacks; there are a few frame buildings, with tile roofs, and 3 stone buildings, all small; about 25 houses in all.

No transportation corrals; plenty of ground adjacent to stream south of the village where corrals could be constructed.

Post-office is in a store on corner of street just west of the ruins of old church; no other offices.

Good camp site on rolling ground west and south of village for a brigade of troops; sufficient water of good quality; good grazing; wood plentiful.

Old, ruined blockhouse on hill east of village, and another on hill northwest of village.

Calzada running southeast to Artemisa.

Best line of approach in case place were defended would be from the north or west; ground to the south and east is low.

Dolores.—Barrio. District north of and bordering on Artemisa. Contains central Pilar and the fincas La Carlota, San José, and Resolución. No point bearing the name.

Guanímar.—Barrio. A district southeast of Artemisa adjoining Cañas barrio. Fincas bearing the names Desengaño, Ingenito, Júpiter, and Soledad are within its borders. There is no point bearing the name.

Mojanga.—Barrio. A district south of Artemisa, adjoining Guanímar barrio. Fincas named Unión, San José, San Pedro, Neptuno, Isla de Cuba, and Minerva Auxilio are within its borders. There is no point bearing the name.

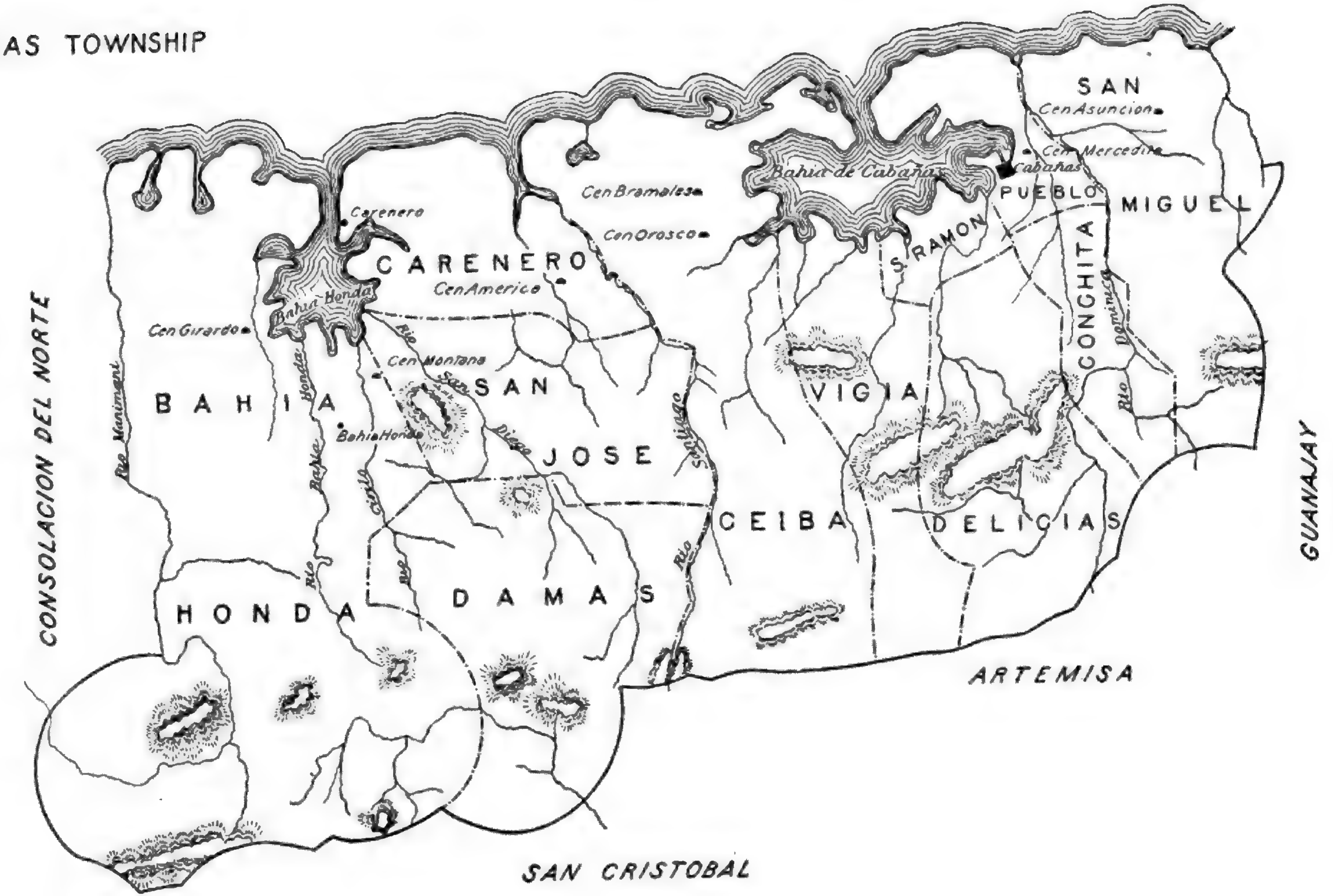
Pijirigua.—Barrio and village. This barrio is southwest of and borders on Artemisa barrio. It contains the villages of Mangas Station and Las Mangas, and the fincas Buena Suerte, Consecuencia, Esperanza, Santa Ana, San Nicolás, and Auxilio.

The village is 1 mile from Mangas Station on the Western Railway of Havana. It consists of about 12 small stone and frame buildings; none suitable for quartering troops. It has no telephonic or telegraphic connections, and there is no place to camp troops.

Mangas Station.—Village. Situated on Western Railway of Havana, 2½ miles east of Punta Brava. It consists of a building containing ticket office, freight house, and residence; a store and some huts; two sidings 400 yards long, but no loading platform.

Las Mangas.—Village. Situated on the calzada, 4¾ miles southwest of Artemisa and 2½ miles south of Mangas Station. It consists of a store, a schoolhouse, a half-dozen huts, a frame building now used as quarters for the rural guard (15 men), the ruins of an old church, and a walled cemetery. Just east of the village is a large fresh-water lake. The water would have to be boiled for drinking. Surrounding country is low and uncultivated; grazing is fairly good and

CABAÑAS TOWNSHIP



wood plentiful. A regiment of infantry or cavalry could be camped here in dry season.

Pueblo Nuevo.—Barrio. A district southwest of Artemisa, adjoining Mojanga barrio. Fincas known as Guanal, Ojo de Agua, Larrazabel, Unión, and San Francisco de Borges are within its borders. There is no point bearing the name of the barrio.

Puerta de la Güira.—Barrio and village. The barrio is northeast of Artemisa barrio, between it and Capellanías barrio. Besides the village there are within its borders fincas named Concepción, Chacon, Diligencia, Piragua, and Retiro. The village consists of about 25 small houses. It has no buildings suitable for troops.

Punta Brava.—Barrio and sitio. Barrio is southwest of Artemisa and adjoins Pijirigua barrio. The fincas Alternativa, Ave María, Santo Tomás, San Roque, San José, and Linares are within its borders. The sitio is situated on the Western Railway of Havana, 8 miles southwest of Artemisa. It consists of the railroad station, a store, and 3 huts. There is a siding 400 yards long, but no loading platform.

San Juan.—Barrio. A district west of Artemisa and adjoining Punta Brava barrio. Fincas named Santa Teresa, Iemen, San Miguel, San Juan de Dios, San Juan Bautista, La Gloria, and Esperanza are within its borders.

Virtudes.—Barrio. A district northeast of Artemisa and adjoining Capellanías barrio. Fincas named La Caña, Cocal, Favorita, La Manuela, Petit Versailles, San Rafael, and Santa Rita are within its borders. There is no point bearing the name.

TOWNSHIP OF CABAÑAS (CAPITAL, CABAÑAS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Cabañas San Pedro.	Pueblo (Cabañas)	Rural and urban.	....	2,284
Bahía Honda	Bahía Honda	Rural	18.5	2,566
Carenero	Carenero	do	18.5	455
	Ceiba	do	7.6	2,338
	Conchita	do	4	336
	Damas	do	15	243
	Delicias	do	5.7	603
Santiago de Nuñez	San José	do	12.2	814
	San Miguel	do	4	1,021
	San Ramón	do	3.5	530
	Vigía	do	6.8	362

Cabañas.—Barrio and town. The urban portion of the barrio comprises the town of Cabañas. Sitio San Pedro and central Mercedita are situated in the rural portion of the barrio. The territory along the calzada running east to central Mercedita is also called Cabañas.

The town of Cabañas is situated on the north end of a ridge overlooking Cabañas Bay, with the main street running down to the bay. Houses nearly all one story, and, with few exceptions, built of stone and cement.

It is the terminus of the Guanajay-Cabañas calzada, 15 miles northwest of Guanajay. A bus line makes two trips each day to Guanajay via Mariel.

The town has no industries.

Population, 1,015.

Water supply obtained from wells and cisterns, and very limited.

Oil lights at street corners.

Barracks: The church situated on top of the ridge overlooking Cabañas Bay is a one-story structure with tile roof; in good repair and good sanitary condition. It is situated in the highest part of the town and would make a good place of defense against infantry or cavalry. One hundred infantry could be quartered in the church. Water obtained from wells in the town.

Hotel La Pública, just north of the church, is a two-story frame structure with an iron roof; sufficient room for one company of infantry; in good condition; sanitary condition fair. Water obtained from wells and cisterns in town. Old-style closets.

The city hall, just back of the church, and the rural guard quarters next to it, would accommodate about one company of infantry. They are one-story stone buildings, tile roofs; in good condition; sanitary condition good. Water obtained from cistern in court back of building; fair quality. Old-style closets.

Stable situated just across the main street from Hotel La Pública. It is a one-story frame structure, iron roof; capacity about 20 horses.

No transportation corrals, and no ground suitable.

No storehouses available, unless small houses were used.

Post-office building across the street from Hotel La Pública.

Telephone central in post-office; connects Cabañas with Bahía Honda, Quiebra Hacha, Mariel, and Guanajay.

No available camp site in vicinity.

Three wood and stone blockhouses, 12 by 12 by 20 feet (two stories) high; walls 1 foot thick, filled with broken stone. One old blockhouse, stone and brick, 3 stories high; walls 1½ feet thick; diameter 25 feet, height 25 feet.

Calzada east to Guanajay; calzada west to Bahía Honda; dirt road southeast to San Juan Bautista de Cabañas; dirt road southwest to cane fields.

Best line of approach for attack would be along ridge from the southeast.

San Pedro.—Sitio. This place consists of a half dozen houses near the wharf on Cabañas Bay.

Bahía Honda.—Barrio and town. A barrio situated southwest of Cabañas and bordering on barrios of Carenero and San José. Centrales Montaña and Girardo, and colonias Amable, Mercedita, Corojal, Cayao, Candelaria, Divisia, Pastora, Dos Hermanos, and Morán are within the limits of this barrio.

The town of Bahía Honda is at the foot of the mountains, 18½ miles by road west of Cabañas, and about 1½ miles south of Honda Bay. The hills to the south rise abruptly from the town. The Montaña River flows about 1½ miles east of the town, and the Bahía Honda River touches the western edge of the town. Country east, north, and west, rolling.

Aside from the usual blacksmith, carpenter, and cobbler shops, nearly all the industries around the town are conducted by Americans who are interested mostly in the cultivation of oranges and pineapples. Following are the names of corporations, with amount of land owned by each, all within a radius of 4 miles from Bahía Honda: Buena Ventura, 1,000 acres; Redención, 1,000 acres; Palm Grove, 900 acres; Cuban Sharon Land Company, 1,000 acres; American Improvement Company, 30,000 acres; and Nazareno, 3,000 acres. The last named is owned by an English company. All of the others are owned by American companies.

All of the sugar mills in the vicinity have been destroyed except Bramales and San Luis, 10 and 9 miles, respectively, northeast of the town, and Girardo, about 1 mile east.

A great many pineapples and oranges are shipped from the port of Bahía Honda.

The buildings in the business portion of the town are constructed of stone, with tile roofs; one story high. The residence portion consists of frame houses with grass roofs, while a considerable portion are native shacks.

Population, 1,263.

Water is obtained from the Bahía Honda River, west of town, and from numerous wells throughout the town.

No sewer system. The town is very dirty and the streets are not in good condition (November, 1906). Some of the streets have deep gullies in them washed by rains from year to year, and no attempt seems to have been made to repair them. No attempt is made to remove filth or deposits.

No street lights.

Barracks: One-story stone building on road to the dock; it is tile roofed, is about 50 feet long by 40 feet wide, and has a court in the rear; used as a club building; repair and sanitary condition good; would accommodate 50 men; water of good quality obtained from a well in court. No modern closets.

One-story stone building, tile roof, adjoining and north of club building; about 50 feet long by 30 feet wide, with a court in rear; repair and sanitary condition good; capacity, about 40 men; water of good quality obtained from a well inside of court. No modern closets.

A one-story stone building, tile roof, in center of town on main street, used as a school building; about 100 feet long by 40 feet wide, with a court in rear; repair and sanitary condition good; would accommodate about 100 men; water of good quality obtained from well in court. No modern closets.

A one-story stone building, tile roof, on street south of and running parallel to main street; it is a rural-guard barracks. Front of the building is about 40 feet long by 30 feet wide, with an extension in rear about 75 feet long by 15 feet wide; court in rear, where stables have been constructed sufficient for 30 horses. Building would accommodate 75 men; repair and sanitary condition fair; water of good quality obtained from well inside of court. No modern closets.

There are also two frame houses and a shack which would accommodate about 35 men.

Stable inside of court of rural guard barracks sufficient for 30 horses.

No transportation corrals. Corral could be constructed south of calzada, on west bank of Bahía Honda River, or 1½ miles northeast of town, on the Montaña River.

No hospital or buildings suitable except those above described.

Storehouses: Old city hall, just south of the church. It is 100 feet long by 40 feet wide; one-story stone building; tile roof, cement floor; no tramways, railroad sidings, or unloading platforms.

One-story stone building, tile roof, at the wharf on Bahía Honda Bay; about 50 feet long by 20 feet wide.

There is a wharf running from the warehouse; it is built of wood and is 50 feet long by 10 feet wide; a tramway runs from end of wharf into warehouse; one hand truck; the platform of this truck is about 15 feet long by 5 feet wide: no unloading platform. The wharf is connected with the town by a good metaled road 1½ miles long. Boats drawing about 6 feet of water can unload at the wharf.

There are three iron tanks for holding drinking water; each tank has a capacity of about 20 barrels.

The light-house on the beach, close to the wharf, is about 20 feet high; it burns petroleum.

Post-office and telephone central on main street, one block east of school building.

A regiment of infantry or cavalry could be camped south of the calzada, on west bank of Bahía Honda River; water fair; plenty of wood, and good grazing.

Best location for camp of two or three brigades of troops would be on the Montaña River about 1½ miles east and northeast of town. Wood easily obtained from the mountains; water and grazing of excellent quality, and plenty of it; ground rolling, well drained and sufficiently high to insure good sanitary conditions.

No defenses.

No railroads.

Calzada leads west about 1 mile and continues as a dirt road west to village of La Mulata. Calzada north to beach; dirt road east to San Diego de Nuñez; dirt road northeast to central Montaña, Oroszo, and the town of Cabañas; trail south into mountains to finca Aguacate, Vega Morales, and Rosario, thence to the town of San Cristóbal or Candelaria.

Should attack town from the south or northeast.

Carenero.—Barrio and village. District lying west of Cabañas, bordering on Bahía Honda Bay and barrio of Ceiba. The village of Carenero, Fort San Fernando, central América, the colonias Las Cuevas, Candelaria, Mercedes, Remedios, and potreros called San Bernardo de la Ortigosa, San Ignacio, and Santa Teresa are within its borders. The village is a fishing settlement on Honda Bay, near entrance. It consists of 15 wooden buildings.

Ceiba.—Barrio. A rural district west of Cabañas. Centrales Bramales and Orosco, and colonias San José, Recompensa, Refugio, San Agustín, San Esteban, and San Pedro are within its borders. No point or village bearing the name in the district.

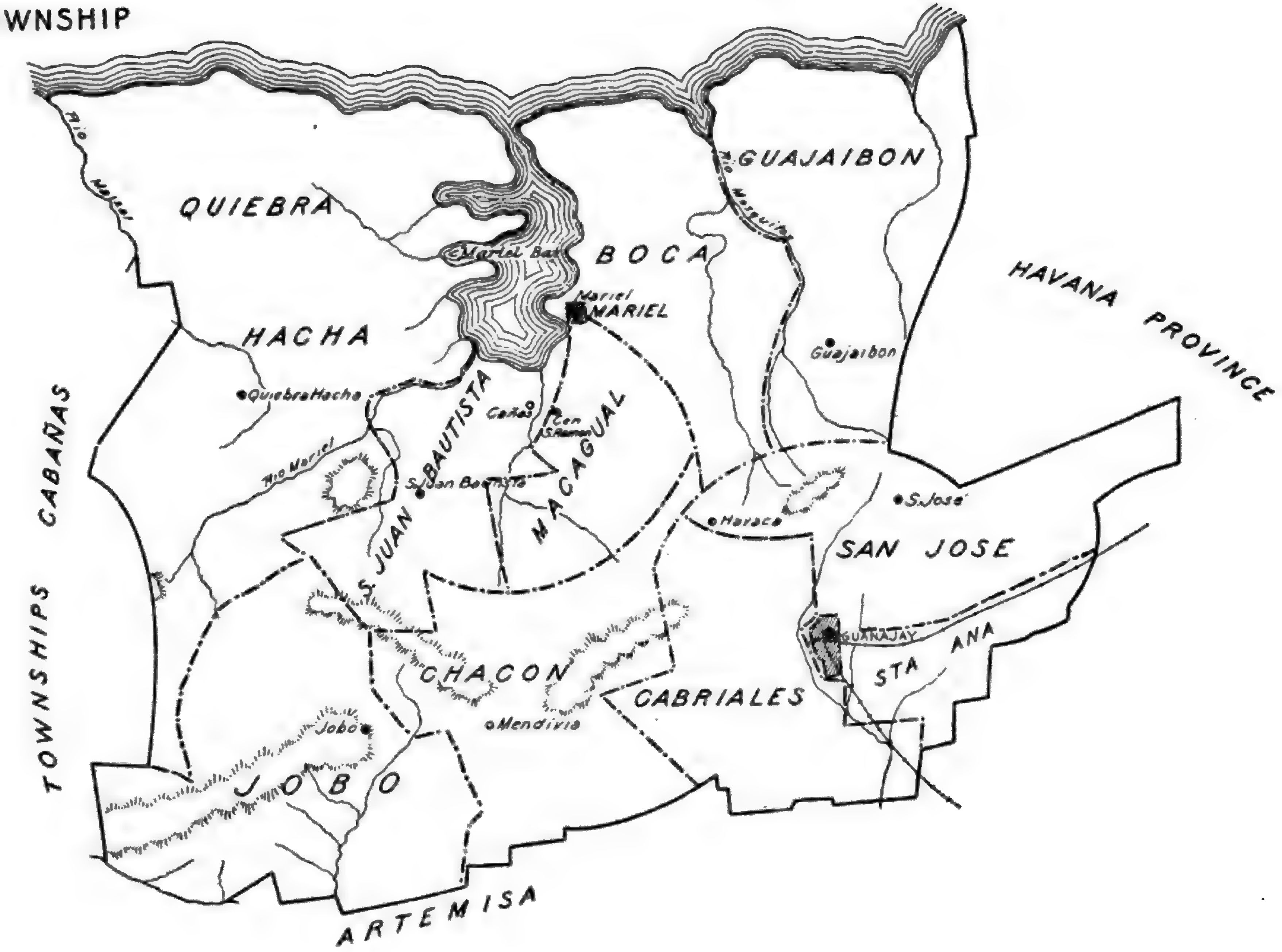
Conchita.—Barrio. A district south of and adjoining Cabañas barrio. Within its borders are colonias Conchita, San Ignacio, and San Juan Bautista, the potrero Encrucijada, and fincas Martillo, Patabanal, and San Francisco de Asís. No point within the barrio other than the colonia Conchita bears the name.

Damas.—Barrio. The barrio is southwest of Cabañas, bordering on the barrios Ceiba and San José. Fincas Brujo, Camarones, Las Cuevas, Esperanza, Paredones, Porlier, San Blas, and La Vega are within its borders. No point or village bearing the name in the district.

Delicias.—Barrio. A rural district. It is southwest of Cabañas and adjoins Conchita barrio. Potreros known as Boucourt, Delicias, Guásimas, Medina, Rubí, Santa Ana, San Rafael, and San Sabastián are within its borders. No point other than the potrero Delicias bears the name in the district.

San José.—Barrio. Southwest of Cabañas and bordering on the barrios of Damas and Carenero. Colonias Jesús Nazareno, San Gabriel, and Santiago are within the limits of the barrio. It also contains the ruins of what was once the town

GUANAJAY TOWNSHIP



of Santiago de Nuñez. This was at one time a good-sized town, but was entirely destroyed in 1896. There are now about 20 houses, mostly shacks. It consists of one long paved street, in very bad condition.

San Miguel.—Barrio. A district east of and adjoining Cabañas barrio. There are within its borders potreros named Santa Isabel, Dos Hermanos, Jesús María, and San José Arróstegui, central Asunción, and colonias Ramos, San Nicolás, Constancia, and Herradura. There is no point bearing name of barrio.

San Ramón.—Barrio. A rural district. Situated west of Cabañas and adjoins Delicias barrio. Fincas named Colonia, Asentista, Misiones, and Sirena are within its borders. No point bearing the name in the barrio.

Vigía.—Barrio. A rural district west of Cabañas and adjoining San Ramón, Delicias, and Ceiba barrios. Potreros known as Arresto, Angelita, Delirio, Hermita, Madama, San Claudio, San Francisco, and San Joaquín are within its borders. No point bearing name in the barrio.

TOWNSHIP OF GUANAJAY (CAPITAL, GUANAJAY).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Guanajay	Norte de Guanajay	Urban		2,611
	Sur de Guanajay	do		3,789
	Boca	Rural	5	348
Cayado	Cabriales	do	1.2	856
Hacienda Mendive	Chacón	do	3.7	646
Guajaibón	Guajaibón	do	5.5	644
Jobo	Jobo	do	12	390
	Macagual	do	3.7	546
Mariel	Mariel	Urban	8	1,593
Quiebra Hacha	Quiebra Hacha	Rural	9	1,636
San José Jabacó.	San José	do	2	566
San Juan Bautista Cañas.	San Juan Bautista	do	17	761
	Santa Ana	do	2	950

Guanajay.—Barrio and town. The town is situated about 7½ miles south of the port of Mariel and some 30 miles by road southwest of Havana. It is divided into two wards or barrios, viz, Norte and Sur de Guanajay. It is the terminus of a branch of the United Railroads of Havana and the Havana Central Electric Railroad. It is also on the old Artemisa-Mariel trocha. It can be reached from Havana by United Railroads via Rincón; by macadamized pike via

Marianao; by water to Mariel, thence by pike; by Havana Central Electric Railway.

The population is 6,400.

Just back of grocery store, corner of Mártires and Máximo Gómez streets, is a large well which supplies water for the town. The water is pumped into two large tanks and supplied throughout the town by means of 6-inch mains (cast iron), laid in 1899. The old mains are now gradually being replaced by galvanized-iron pipes. This water system is owned by Faustino Álvarez. The well is 90 feet deep and never has less than 30 cubic feet of water. Water is of fair quality. A well has been drilled on high ground about 2,700 feet west of town. This hill is 49 feet above the town. The well is 84 feet deep, 12 feet diameter; it has three galleries, one running north to a distance of 131 feet, dimensions 7 by 7 feet; one northwest, 152 feet long, 7 by 7 feet; and the other south 40 feet long, 7 by 7 feet. This well has been cemented and covered with masonry so as to keep out all surface water. It is equipped with a steam pump. A large stone tank into which the water is forced is entirely covered. An 8-inch main leads from this tank and connects with the 6-inch mains in the town. This well is filled at all times to within 20 feet of the top. The water has been analyzed by a chemist in Havana and pronounced to be of excellent quality.

Barracks: About 1,000 men could be quartered within the town and about 800 in the reform school near town. The buildings most suitable for barracks are as follows:

Rural guard quarters on Luz Caballero street; sufficient space for 50 men and 50 horses. Constructed of adobe; one story high.

Cigar factory, corner of Crombet and Máximo Gómez streets, has sufficient space for 100 infantry. Constructed partly of wood and partly of stone; two stories high. Another cigar factory, on the corner of García and Herrera streets, would also accommodate 100 men. Has large well inside of court.

Jail, corner of Céspedes and General Banderas streets; two companies of infantry. Constructed of stone; one story high; tile roof; cement floor. The remainder of this block is the old Spanish barracks; badly in need of repairs, and occupied by the poor people of the town. Would accommodate

2 companies of infantry, or 2 troops of cavalry, by erecting stalls or picket lines inside the court. Court is inclosed by a stone wall 9 feet high. There is a large well in about the center of the block with sufficient water for a battalion. A dividing wall cuts the well in half, so that water can be obtained from the same well on each side of the wall.

The city hall on Mártires street between Cisneros and Céspedes would accommodate 100 men. Constructed of stone; one story high; would also make an excellent headquarters building.

Schoolhouse, corner of Villate and Luz Caballero, would accommodate 50 men; frame building; tile roof; one story. Schoolhouse, corner of Agramonte and Aguilera streets, 50 men; frame building; tile roof; one story high. Hotel American, just opposite the public square, 100 men; would also make an excellent headquarters; constructed of stone; two stories high; tile roof.

Police station, on Martí street between Zayas and Olvierto streets, would accommodate 100 men; constructed of stone; one story high; tile roof.

The government reform school is less than a mile east of the center of town on the calzada. The Havana Central Railroad is laid between the calzada and the school. The school was built by the United States infantry in 1898 for a post and was afterwards turned over to the Cuban Government and converted into a reform school. There are adequate quarters for two battalions of infantry or two squadrons of cavalry. In case of cavalry it would be necessary to construct picket lines or stables. An electric-light station, a steam laundry, and a pumping station are near the entrance of the reservation. The water from the well at the pumping station is supposed to be of excellent quality, and there is a sufficient supply for all purposes. Water is pumped into a large tank near the center of the reservation, from which point it is piped to all buildings. There are several stand pipes throughout the reservation and a large stone tank, near the quartermaster's buildings, where stock is watered. All buildings are constructed of wood with galvanized-iron roofs, excepting the director's house, which has a tile roof. Road around the inside of the quadrangle is metaled. Besides quarters for troops and officers and pumping station there is a hospital, capacity 75 beds; blacksmith, carpenter, and paint shops; bakery and sufficient buildings for storing property.

The civil hospital, San Rafael, is in the northwest corner of the town. Constructed of stone, one story high, tile roof. It was built in 1827 and was called Cuartel San Carlos. Was used as a barracks for cavalry until 1868, when it was converted into a detention hospital for both soldiers and civilians. Was converted into a civil hospital in 1898 by order of General Brooke, and is supported by the Government. It is divided into five wards, viz, rural guards, consumption, surgical, yellow fever, and insane. Is fitted with an operating room, dispensary for employees, dining room, and kitchen; has 98 beds. A large well in the center of the court is 6 feet in diameter and 36 feet deep. Until recently the water was forced into a large tank by a windmill pump. Windmill was destroyed during the hurricane of October 17, 1906, and has never been repaired.

There is a post-office, telegraph office, and telephonic communication with Havana, Mariel, Quiebra Hacha, Cabañas, and Bahía Honda. The telegraph office is on Mártires street, near the river.

The high ground west of town where new well is situated would make a good camp for two or three regiments of infantry or cavalry. Grazing ground; water obtained from well; fuel, however, is scarce and would have to be hauled from the foothills 8 or 10 miles to the west.

There is an old Spanish fort on the hill northwest of town. It is in dilapidated condition and is entirely overgrown by underbrush.

The United Railroads' freight depot is 115 feet long by 35 feet wide and constructed of stone. It is one story high. There are three side tracks at end of line, each about 500 feet long, also one turntable.

The Havana Central Electric line is double tracked through the town, and there is one side track at the end of the line about 300 feet long. Freight depot and power house are at the end of General Díaz street; 200 feet long by 30 feet wide, constructed of stone, one story high.

Roads out of town: Calzada east to Havana, calzada west to Mariel and Cabañas, calzada southwest to Artemisa, and unimproved roads southeast to Ceiba del Agua and Alquízar.

Boca.—Barrio. A district northwest of Guanajay, on Mariel Bay. No point bearing the name.

Cabriales.—Barrio. A district southwest of and bordering on Guanajay. Contains Cayado and some small farms. No point bearing the name.

Cayado.—Sitio. Consists of one store and a schoolhouse.

Chacón.—Barrio. A district west of Guanajay and bordering on Cabriales barrio. It contains the hacienda of Mendive and small farms. The finca of Mendive is situated on high ground overlooking entire surrounding country and is good location for signal station. Water in abundant quantities from wells; there is good grazing and good camp site.

Guajaibón.—Barrio and sitio. The barrio adjoins the barrios of Boca and San José, north of Guanajay. The place bearing the name consists of a store and one house.

Jobo.—Barrio and village. The barrio is a district west of Guanajay, bordering on Chacón barrio. The village consists of a store and half dozen houses.

Macagual.—Barrio. A district northwest of Guanajay, bordering on barrios of Chacón and Boca. It contains central San Ramón and many small farms. No point bearing the name.

Mariel.—Barrio and town. The seaport town bearing this name is situated near the south end and on the east side of Mariel Bay. It is not a port of entry; large seagoing vessels, however, can enter the bay. The government light-house is at the entrance and on the east side of the bay. The government quarantine station is on a peninsula on the west side of Mariel Bay near the entrance. A high ridge of hills beginning near the light-house extends to the south along the east side of the bay close to the shore line, and extending inland follows the calzada toward Guanajay. South of Mariel the country opens up into a valley. West of the bay the ground gradually rises to a low ridge.

Population, 1,592.

Water supply: There are many cisterns throughout the town, but the principal water supply is obtained from a large spring near top of hill just east of town. Plenty of water for entire town; excellent quality; contains considerable amount of magnesia; piped into town through a 6-inch main.

No sewer system. All filth and rubbish that can not be burned is thrown into bay. Oil lamps are used to light houses and streets.

Barracks: A large school building, built of brick or stone and cement, opposite the church, would hold about 75 men; there is a cistern inside of the courtyard; water from spring is piped into building. A two-story frame building on beach, used now as a café and theater, would hold 75 men. Water from the spring is piped into building. There is a large three-story stone house on a high hill east of town which has 70 or 80 rooms and an auxiliary building, one story, also built of stone. Three hundred men could be quartered in these buildings, but they have recently been acquired by the National Government and are to be used for leper hospital (1908).

No stables.

No corrals. The only open ground near town lies south of it. There is a vacant space on peninsula just west of town on which a corral could be located. Water could be obtained from the public watering trough in the town.

The buildings described under barracks could be used as hospitals.

Storehouses: Brick and cement building, one story high, about 100 feet long by about 30 feet wide, situated on beach near two small wharves and plantation railroad. Building owned by central San Ramón; could be used as quartermaster and commissary storehouse. The two wharves mentioned are of wood and a narrow-gauge railroad runs to end of each. One belongs to central San Ramón; is about 50 feet long by 15 feet wide with a T on end of it, 30 feet long by 15 feet wide, making total length of wharf about 65 feet. Vessels drawing about 9 feet of water can come alongside. The other wharf is close by; 50 feet long by 9 feet wide. Vessels drawing about 9 feet of water can come alongside. It is owned by the Industrial and Mineral Cuban Company.

There are no railroad sidings or unloading platforms near warehouse.

Principal offices: The post-office is on the main street just below the church. Telephone in post-office connects with Guanajay, Quiebra Hacha, Cabañas, and Bahía Honda; there is also a line from the post-office to the quarantine station.

No ice machine.

No camp sites available in the immediate vicinity of Mariel, as nearly all level ground is under cultivation. The ingenio of Tinaja, on high ground west of Mariel Bay and 1 mile from the quarantine station, would make a good camp for a couple of regiments of infantry or cavalry. Ground high and well drained. Water obtained from a large spring; wood plentiful; grazing good. A couple of regiments of infantry could camp on the heights east of Mariel obtaining water from spring which furnishes Mariel with its water supply; wood plentiful; grazing good; excellent sanitary conditions.

Fortifications: Fort Elías is situated on the end of the peninsula between the quarantine station and Mariel; it is now practically a ruin. One large stone house capable of quartering 50 men is still standing; walls of the fort are of stone and are broken down in a number of places. They are about 5 feet high and 4 feet thick at the base. Three iron muzzle-loading cannons are still mounted within the inclosure. Water is obtained from a cistern, which is in poor condition.

Railroads: Plantation railroad owned by the Industrial and Mineral Cuban Company runs from the wharves through the town to San Juan Bautista de Guanajay via central San Ramón; one short siding near beach for about half a dozen cars.

Roads: Calzada leading south from Mariel one mile and three-quarters to central San Ramón where calzada branches, one to Guanajay and one to Cabañas via Quiebra Hacha. Road from town runs west, up hill to leper hospital; from here it continues through Sabana, Banes, central Lucía and on into Havana with branch roads connecting with the calzada. From the hospital it is practicable only for pack trains. Trail is called Camino Real or Mosquito Trail.

Best approach to town is from east over Camino Real, taking the hills which overlook and command harbor and town.

Quiebra Hacha.—Barrio and village. The barrio is northwest of Guanajay, next to the barrio of San Juan Bautista. The village is on the Guanajay-Cabañas calzada, about 8 miles northwest of Guanajay, and is surrounded by level country. There are probably a dozen frame houses; remainder native shacks. There are no industries.

Population, about 300.

Water supply from wells and cisterns; of fairly good quality; limited quantity.

No sewer system or lights.

Barracks: Hotel at head of main street and calzada; a two-story frame structure, with tile roof; capable of quartering 50 men; is in good repair; good sanitary condition; has a well inside of court. Old style closets. Rural guard quarters on east side of main street, third square north of calzada; is a one-story frame building, tile roof; sufficient room for 20 men; well in courtyard in rear. A new, one-story frame building, tile roof, on west side of main street, fourth block north of calzada; good sanitary condition; sufficient room for 50 men; water could be carried from other wells in town.

No stables.

No transportation corrals. A corral could be located on land just east of the village; water obtained from the Quiebra Hacha River.

Post-office and telephone central in building one square north of the calzada, on east side of main street.

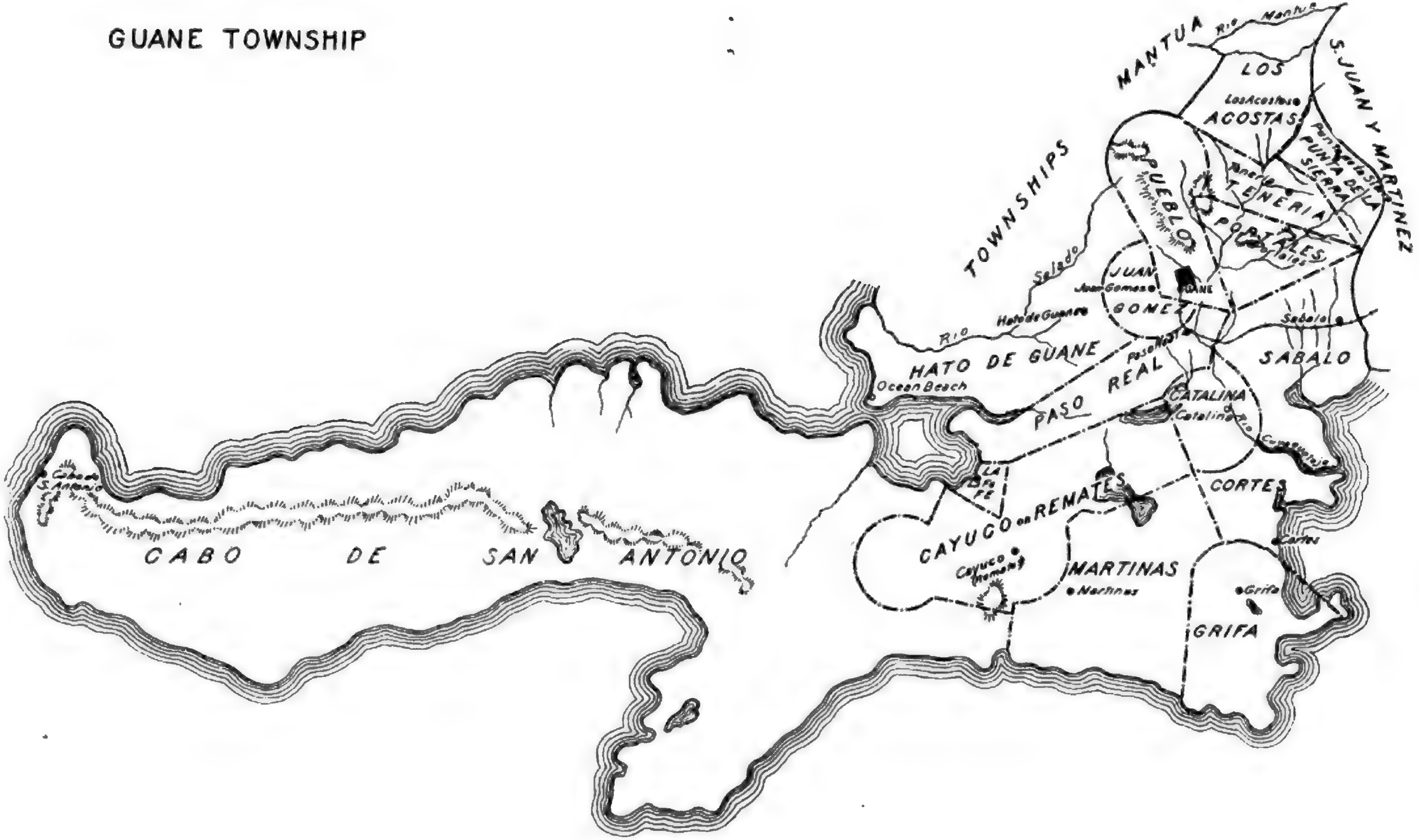
Fair camp site for regiment of cavalry or infantry 1 mile east of village, on Quiebra Hacha River; water fair; grazing good; fuel scarce.

Calzada east to Guanajay and west to Cabañas; dirt road north to central Asunción.

Best line of approach for attack is from the northeast.

San José.—Barrio and sitio. The barrio is a district north of and bordering on Guanajay. It contains the fields called San José, San Francisco (an old sugar plantation), and besides the sitio bearing its name, the village of Jabacó. The sitio is on road leading north from Guanajay, about 2½ miles distant therefrom and at point where a trail leads to Quintana. It consists of 2 houses near an old ruin.

GUANE TOWNSHIP



Jabacó.—Village. Situated 2 miles from town of Guanajay, on calzada to Mariel. Consists of a frame house and 5 native huts.

San Juan Bautista.—Barrio and sitio. The barrio is northwest of Guanajay, bordering on Macagual barrio. The village of Cañas and central San Ramón are within its borders. The sitio is the terminus of the plantation railroad running to Mariel via Cañas and belonging to the Industrial and Mineral Cuban Company, which also operates and owns the asphalt mines at this place. There are a few scattered houses; water is obtained from cisterns and wells, and fuel is scarce. Sugar cane is cultivated very extensively in this locality.

Cañas.—Village. Situated 400 yards west of central San Ramón, on calzada. Consists of a blacksmith shop, store, and 5 huts.

Santa Ana.—Barrio. A district containing small farms and situated southeast of and bordering on Guanajay. No point bearing the name.

JUDICIAL DISTRICT OF GUANE.

Township:	Population.
Guane	29, 236
Mántua	11, 041

TOWNSHIP OF GUANE (CAPITAL, GUANE).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Guane	Pueblo (Guane)	Urban and rural.	....	2,093
Los Acostas	Acostas (Los)	Rural	15	948
Cabo San Antonio	Cabo San Antonio	...do	70	706
Catalina	Catalina	...do	8	743
Cayuco or Remates	Cayuco or Remates	...do	19	5,551
Cortés	Cortés	...do	17	1,219
La Fé	La Fé	...do	18.5	137
Grifa	Grifa	...do	19.7	3,430
Hato de Guane Ocean Beach.	Hato de Guane	...do	10	804
Juan Gómez	Juan Gómez	...do	6	619
Las Martinas	Martinas	...do	19	3,839
Paso Real	Paso Real	...do	3	2,086
Portales	Portales	...do	5	1,677
Punta de la Sierra	Punta de la Sierra	...do	10	1,272
Sábalo	Sábalo	...do	8.5	3,098
Tenería	Tenería	...do	7.5	1,014

Guane.—Barrio and town. The town is situated in Guane barrio, 40 miles southwest of Pinar del Río city, on low hills and on the west bank of the Cuyaguateje River, which almost surrounds the town, the river at this point flowing almost due south. The town is about 60 feet above the river. Just across the river to the east and about three-fourths of a mile away is a jagged formation, which rises abruptly to an elevation of 600 or 700 feet. Two miles farther south is another of these sentinel hills rising abruptly and marking the extreme southwestern limit of the mountain ranges. These two hills form conspicuous landmarks in this vicinity. The town is built on five streets of irregular arrangement. The tiendas are nearly all brick and cement buildings. Principal industry, tobacco. Guane is a distributing point for many barrios in the vicinity and is the present terminus of the Western Railway of Havana. It is also the center from which three important highways radiate. Population, 1,369.

Water supply: The Cuyaguateje River flows very near the northern edge of the town and affords an ample supply for all purposes. Water is brought into town in large barrels by venders. Many of the inhabitants get their drinking water from an arroyo almost a mile to the west. This would be unnecessary if they boiled the river water.

The Cuyaguateje River is the only navigable stream in the province. It is a clear, sandy-bottom stream, about 2½ feet deep and 25 yards wide at this point. Vertical mud banks from 12 to 15 feet high. The stream is easily forded in the dry season, but in wet weather is a serious obstacle. There is a wharf, Embarcadero Catalina de Guane, 8 miles below Guane; 8 feet of water during the dry season. The river is not navigable above this point. The wharf, a launch of 25 tons burden, and a storehouse are the property of the Vuelta Abajo Steamship Company. This was the main supply point of Guane before the completion of the railroad.

Acetylene gas is used for lighting.

Barracks: There are several masonry buildings and 2 hotels. A masonry church, 130 by 50 feet, occupies the highest point of the town. The priest's quarters are at the rear end, forming a part of the same building. This makes the building well suited for quartering 150 men; it would also make an excellent headquarters and hospital.

The ayuntamiento, 100 yards west of the church, is a masonry building, about 100 by 60 feet, cut up into offices. At present the entire building is loopholed. The windows and doors are protected by brick loopholed shields, about 7 or 8 feet high. The rural guard cuartel would quarter about 20 men; a small stable is attached. The hotel is a large wooden structure and would accommodate about 40 men. Stables could be constructed about 300 yards back of the hotel near the brickyard, which is situated in a large pasture. A small stream running through the pasture would furnish water for a troop; a good camping place for a small command.

Corrals: Open ground for transportation corrals may be found along the river west of the town and on the main road into Guane from Paso Real, on the west side of the river. In this vicinity, on the heights just south of the town, would be the best location for a large camp. Abundance of water and grass; wood scarce.

There is a post-office and telegraph station; telegraphic connection with San Juan y Martínez and Mántua. These telegraph lines are frequently interrupted in the dry season as a result of fires in the grassy hills, which burn the telegraph poles between these points.

The defenses consist of 8 blockhouses. These could be easily destroyed by artillery fire from the heights commanding the town.

Railroad: The station will be about one-half to three-fourths of a mile from the town. Passenger station, storehouse, and sidings will be constructed.

Roads leading out of Guane: First to San Juan y Martínez, via Sábalo and Galafre; second to Cortés and Galafre, via Paso Real; third to Las Martínas, via Paso Real; fourth to Mántua, via Juan Gómez; fifth to Luis Lazo and Sumidero, via Las Portales, La Tenería, and Punta de la Sierra.

Best line of approach is along railroad through Paso Real. The heights about three-fourths of a mile south of the town cover the approach in this direction, and if taken would render it untenable; they would probably be occupied by the defenders. A secondary line of advance for a flanking column would be along the main wagon road through Sábalo.

There is a good position here for artillery, which, if occupied, would render Guane untenable. The Cuyaguateje is always fordable except after heavy rains.

Los Acostas.—Barrio and village. The barrio is a rural district northeast of Guane. The village consists of a store and a number of scattered houses. The store is situated a few hundred yards north of the Cuyaguateje River and just outside the entrance to San Carlos Valley.

Cabo San Antonio.—Barrio and sitio. The barrio is a rural district southwest of Guane, on the Guanahacabibes Peninsula. The sitio is on the extreme end of the peninsula and consists of a light-house and three houses for keepers of the light.

Catalina.—Barrio and sitio. The barrio is a rural district south of Guane, in the valley of the Cuyaguateje and adjoining Paso Real barrio. The sitio is on the east bank of the Cuyaguateje River, and consists of a large dwelling and a store.

Cayuco or Remates.—Barrio and village. The barrio is a rural district southwest of Guane. The village is 19 miles southwest of Guane, and consists of 4 stores, a drug store, schools, a blacksmith shop, a butcher shop, and several houses. There is also a brick and tile factory. Population about 200. Water is obtained from artesian well at brick factory, and is abundant in quantity at all seasons. Roads lead northeast to La Fé, east to Las Martínas, and west to Mamposton.

Cortés.—Barrio and village. The barrio is a rural district southeast of Guane. The village is on Bahía de Cortés and about 17 miles southeast of Guane. It is a seaport for Grifa, Babineyes, Cayos, and Las Martínas, and consists of about 10 wooden houses with tile roofs. There is also a warehouse from which a pier extends out into the bay.

La Fé.—Barrio and village. The barrio is a rural district southwest of Guane. The village is a seaport, situated on Guadiana Bay, and consists of a warehouse and about 12 native huts. The warehouse is at the end of the pier, which is 400 feet long. The building is 184 by 56 feet, and is used as a store, warehouse, and living rooms. The front part of the structure is masonry and the rest is of wood, with partly tile and partly tin roof. In the yard of this warehouse is also another building 50 by 56 feet. Roads lead from this place to Guane, Remates, and other inland points. Roads good in dry season; difficult in wet season, but are used by carts.

Grifa.—Barrio and village. The barrio is a rural district southeast of Guane. The village, known as La Grifa, consists of one drug store, schoolhouse, post-office, 2 blacksmith shops, and a number of native huts. There are about 150 inhabitants. Roads lead from this village west to Las Martínas, southeast to Majagua, northeast to Cortés, and northwest to Guane.

Hato de Guane.—Barrio and sitio. The barrio is a rural district southwest of Guane. Contains village of Ocean Beach. The sitio consists of a few shacks and a large tobacco barn, situated on a high hill.

Ocean Beach (*Punta Colorada*).—Village. A small settlement of Canadians; a tienda, 2 or 3 houses, a few shacks, a so-called hotel, a storehouse, and a wharf about 350 feet long, affording landing facilities for vessels not over 10 feet draft. Plantation in charge of an American. Not a good camping place—water must be taken from wells.

Juan Gómez.—Barrio and sitio. The barrio is a rural district west of Guane. The sitio consists of a large masonry residence, with a stable for about 20 horses attached, and a large tobacco almacén. These buildings belong to a tobacco finca. Good water in the San Francisco River just back of the house. There is a well in the patio.

Martínas.—Barrio and village. The barrio is a rural district southwest of Guane. The village known as Las Martínas consists of five stores, a drug store, two blacksmith shops, post-office, school, and several houses; also a church and a large warehouse. The warehouse is owned by the Cuban Land and Leaf Tobacco Company, who have their headquarters for Las Remates district at this village. Warehouse is 80 by 250 feet and would shelter 300 men. Population of village about 300. Water is obtained from wells. The tobacco company also has a donkey engine and water tank of good capacity. Roads from this village are, east to La Grifa, south to Jaimiquí, west to El Cayuco, and northwest to La Fé.

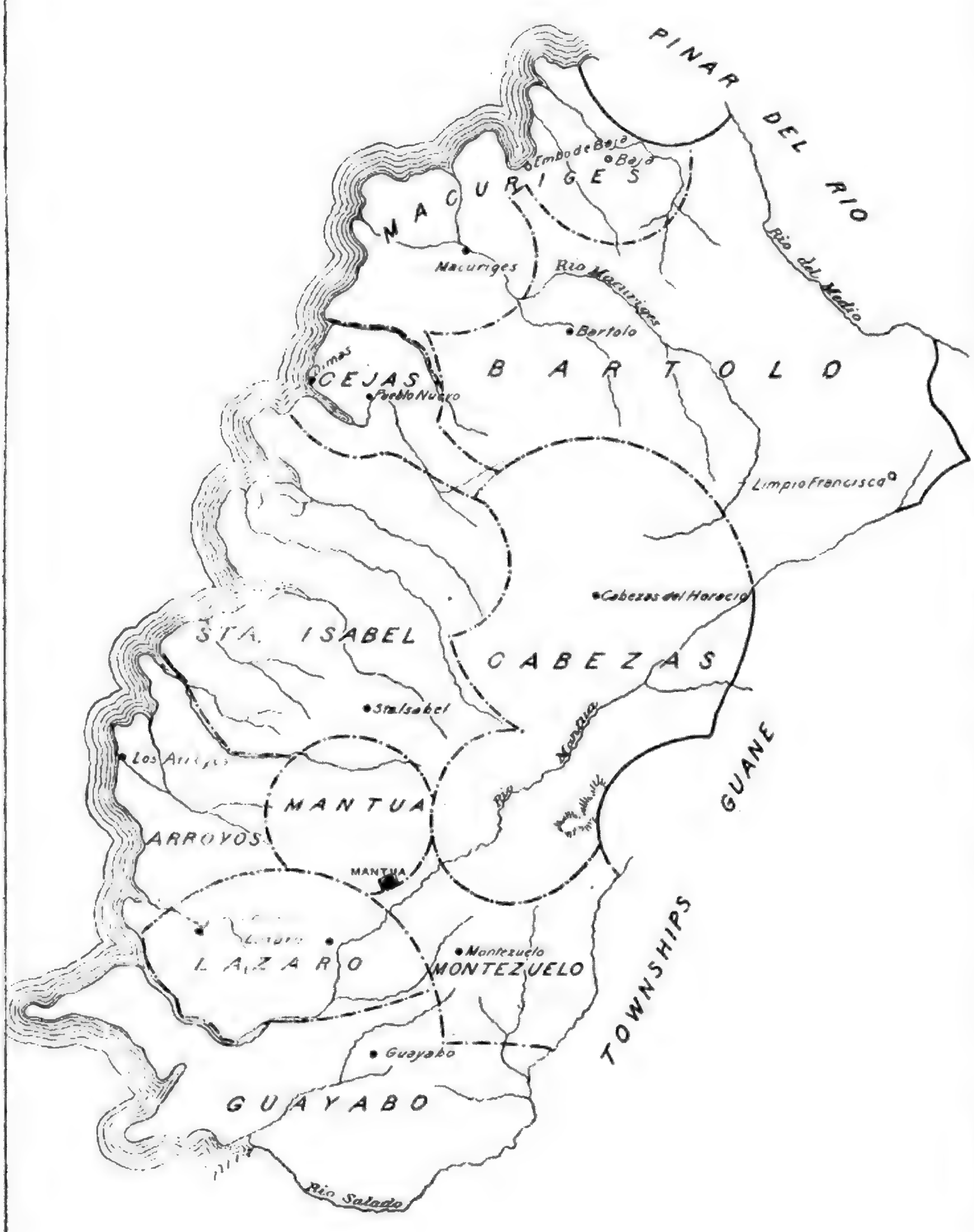
Paso Real.—Barrio and village. The barrio is a rural district south of Guane. The village is situated on the west bank of the Cuyaguateje River and consists of four or five stores, half a dozen dwellings, and several native shacks.

Portales.—Barrio and sitio. The barrio is a rural district northwest of Guane. The sitio consists of two stores, one on each side of the Guane-Limpio Francisco road, and is situated 5 miles from Guane.

Punta de la Sierra.—Barrio and village. The barrio is a rural district northeast of Guane. The village consists of 15 houses, 8 of which have substantial tile roofs, 2 bakeries, 6 stores, and 3 blockhouses; all in good condition. It has two streets, and the main street, which runs northeast and southwest, has a blockhouse at either end. The other street commences about the middle point of the main street and runs northwest and has a blockhouse at the end. The blockhouses are made of brick, one thickness; about 20 feet high by 16 feet wide and 16 feet long and have two tiers of fire and a look-out cupalo. Buildings in center of village suitable for one troop, and building on same street, to the north, suitable for hospital. Corrals could be built on bank of creek. Buildings on road leading to San Carlos suitable for storerooms. Camp site to southeast of village for a squadron; there is water, wood, and grass. Roads lead to San Carlos, Luis Lazo, and Pinar del Río, and the Guane-Limpio Francisco road passes through the village. The village lies at the point of a large mountain range which runs northwest and southeast. Another large mountain range, running east and west, also comes to a point here. There is a narrow gap between the two. Village is hardest to defend from east and southeast sides.

Sábalo.—Barrio and village. The barrio is a rural district, east-southeast of Guane. The village of this name is situated on the Western Railway of Havana between kilometers 219 and 220 west of Havana. It is built along one sandy, level street, running about half a mile nearly east and west, and contains about 25 poorly constructed wooden houses. Principal industry, tobacco. Population, about 300. Good supply of water is obtained from the Sábalo River one-sixth of a mile west. There is also a stream at east end of village and near the church. A large store at

MANTUA TOWNSHIP



corner of street to railroad would quarter about 20 men; vacant ground near for horses. Building is in good repair and apparently in good sanitary condition. A masonry church, 75 by 40 feet, at the eastern end of village would shelter comfortably 150 men. Suitable grounds for corrals are along the river outside of the village. There are no buildings in the village that could be used for storehouses. The postoffice is situated about the center of the village. The railroad station is about half a mile out from the village, and consists of a passenger depot and a storehouse. Camp sites can be found along the river near by; good grass during rains; water is good and plentiful; wood is not abundant. Roads lead to San Juan y Martínez and Guane. Best line of approach is along railroad from the east; the place is commanded about one-half to three-fourths of a mile in this direction.

Tenería.—Barrio and sitio. The barrio is a rural district northeast of Guane. The sitio consists of two stores, one on each side of the road running from Guane to Limpio San Francisco, and is situated 7.5 miles from Guane.

TOWNSHIP OF MÁNTUA (CAPITAL, MÁNTUA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Mántua	**Mántua**	Rural and urban.		1,334
Los Arroyos	**Arroyos**	Rural	8	1,687
Bártolo	**Bártolo**	do	20.5	302
Limpio Francisco.				
Cabezas	**Cabezas**	do	12	515
Dimas	**Cejas**	do	15.6	1,920
Pueblo Nuevo.				
Guayabo	**Guayabo**	do	9	793
Lázaro	**Lázaro**	do	3.5	861
Macuriges	**Macuriges**	do	20	1,409
Santa Paula.				
Baja.				
Embarcadero de Baja.				
Montezuelo	**Montezuelo**	do	4.5	629
Santa Isabel	**Santa Isabel**	do	6	1,591

Mántua.—Barrio and town. The town is situated on the west bank of the Mántua River, 17 miles northwest of Guane, on the Guane-Mántua-Dimas road. The principal portion of the town is built on one street, running northeast and southwest. The tiendas and the principal buildings are constructed of brick and cement; a few of wood. Town is well built and almost all the buildings are in good state of repair.

Principal industries, tobacco and distributing point. Population, 1,167.

Water supply is obtained from Mántua River and an arroyo northwest of town. Water from the arroyo is always clear, and that from the river very muddy after rains.

The church would accommodate one-half a platoon. The building is small and constructed of brick and cement; in good repair and sanitary. Rural guard cuartel would accommodate one-half a platoon. There is a small stable attached which would accommodate about 12 or 15 horses. The tienda on northeast corner where street from rural guard cuartel crosses the main street is the most commodious building in the town. It is built of wood, one story, and would accommodate a small troop. Other adjoining buildings would be convenient for storehouses. There are plenty of buildings to accommodate any force that would be sent to Mántua.

Corrals could be placed along the Mántua River southeast of the town, or near the brickyard on the arroyo to the northeast. The latter place is considered preferable.

Post-office and telegraph office near center of town.

Good camp sites near the river, on both sides.

Roads lead out of Mántua to Guane, Los Arroyos, Guayabo, Punta Colorada (Ocean Beach), Dimas, and the northeast hilly district.

The best line of approach is from the southeast along the Guane-Mántua cart road. The hills east of the town command it, and artillery at this point would render it untenable. If a landing were made at the port of Los Arroyos, about 7 miles to the northwest, and an advance made from this direction, a secondary attack could be made from the hills.

Arroyos.—Barrio and town. The barrio is a district bordering on the coast and northwest of Mántua.

The town, Los Arroyos, is situated on the western coast of Pinar del Río about 8½ miles northwest of Mántua, and is built on one long street which ends at the coast. The buildings are nearly all of wood and in good condition. The ground on which the town is built is almost level. It is a shipping and receiving point for Mántua.

Population, 1,056.

Water supply obtained from an arroyo about 1 mile inland from the wharf, and from wells. In a house and warehouse near the wharf are two large steel tanks containing cistern water.

The tiendas and two or three dwelling houses would accommodate 2 or 3 companies of infantry. There is a scarcity of suitable quarters in the town; no large buildings. The buildings are in a good state of repair and many of them new. Sanitary conditions good. Water supply would be very limited.

There is no place in the immediate vicinity suitable for corrals, on account of scarcity of water.

The two large buildings at the north end of the street on the coast would serve as quartermaster and commissary storehouses. Extending from these buildings are two wharves. Boats of 15 feet draft can unload at the larger of the two.

Roads lead from Los Arroyos to Mántua and Dimas.

The best line of approach by land would be from the south from the direction of Mántua, the latter place being used as a base. Were Dimas occupied best advance would be from that direction. Arroyos could be rendered untenable by gunboat, and landing easily made. Arroyos is about 2 or 3 miles on the west flank of the line of advance on Dimas.

This town being a supply point for so large a district, is important from a military point of view, and would have to be occupied were Mántua occupied.

Bartolo.—Barrio and sitio. This district is north of Mántua. It contains the sitio Bartolo, the sitio Limpio Francisco, and a number of scattered houses.

The sitio of Bartolo is a small settlement situated at a crossroads 20½ miles north of Mántua and near the Bartolomé River. It consists of one wooden house containing a general store, three tobacco barns and an old dilapidated blockhouse. These buildings are on a small ridge which overlooks the Bartolomé River Valley. There are a number of houses scattered throughout the valley. A wagon road runs in a northerly direction to a farm named Caniego. Another road runs in a southerly direction to Dimas via Pinar Oscuro. There is also a road running nearly due west to Dimas and Macuriges.

Limpio Francisco.—Sitio. A store about 24 miles northeast of Mántua in the Francisco Valley and in a district known as Francisco. In the district are a number of scattered houses and a schoolhouse, besides the store Limpio Francisco.

Cabezas.—Barrio and sitio. The barrio is a rural district northeast of Mántua.

The sitio, known as Cabezas de Horacio, is a hog ranch, with three houses of native construction.

Cejas.—Barrio. A rural district north of Mántua. There is no point bearing the name in the barrio. It contains, however, the villages of Dimas and Pueblo Nuevo.

Dimas.—Village. Situated on the northwest coast of the province of Pinar del Río, and built on one long street, about one-third of a mile long, terminating at the coast. There are two short cross streets about the center of the village on the more northern of which the principal tienda is situated. Nearly all the buildings are constructed of wood, and with the exception of the storehouse at the northern end of the village are small. Dimas is the port of supply for the northwestern district of the province. There are two wharves. The longer, about 400 yards in length, affords facilities for unloading vessels of about 15 feet draft. There is a small shipyard. Population, about 500.

Water supply is obtained from wells and is very limited. There is no stream within several miles affording a sufficient supply. Principal buildings are lighted by acetylene gas.

Supply house at the south end of the wharf would accommodate a troop; the large wooden building, at the north end of the main street, one troop; and a tienda across the street could be used as a storehouse. Condition of repair of all of these buildings, good; sanitary conditions, good. There is a small stable that would accommodate about 15 horses.

The rural guard cuartel at the eastern end of the more southern side street would accommodate about 20 men. There is a small stable attached, for about 15 animals. The cuartel is a wooden building, in good repair and good sanitary condition. The church, a wooden building, which is near by would provide a hospital or could be used for a storehouse.

The post-office is near the center of village. There is a telephone line to Mántua, which terminates at the large wooden building already mentioned under barracks. From this point there are also lines to several fincas in the hills, which are owned by the Pedro Murias Company.

There is no good camp site in the immediate vicinity on account of the scarcity of water.

Roads lead out of village to Los Arroyos, Mántua, Pueblo Nuevo, Baja, and fincas in the hills.

The village could be most easily taken by an advance from the direction of Mántua and Arroyos, these two places serving as bases of supply. It could also be taken from the sea; a small gunboat in the harbor would render the whole place untenable, and there are no ready means of preventing a gunboat from entering.

Pueblo Nuevo.—Village. Situated about 3 miles southeast of Dimas. This place is also known as Verona, the name of the circle in which it is situated. It consists of about 20 houses and a few storehouses, all built close together. There is a tienda by the name of Vascongada Occidental, owned by the Iturbe Company. The largest building is one owned by Pablo Suárez, who also owns the rest of the town and much land in vicinity. The house mentioned has a tile roof and is conspicuous on account of its number of lightning rods. A telephone line from Dimas to Pinar Oscuro passes through the town and runs into the woods, but has no connection with Pueblo Nuevo.

Guayabo.—Barrio and sitio. A rural district south of Mántua. The sitio is 9 miles by road south of Mántua. It consists of 2 stores and a few scattered houses.

Lázaro.—Barrio and sitio. The barrio is a rural district situated southwest of Mántua. The principal industry of the locality is the cultivation of tobacco and the raising of cattle and hogs. The sitio is 3½ miles south of Mántua, on road to San Francisco and Colmenar, near the Mántua River, and 7½ miles from the embarcadero at the mouth of the river. It consists of a general store and a few scattered houses.

Macuriges.—Barrio and sitio. The barrio is a district southeast of Mántua. The sitio consists of 2 stores, situated Paula, Baja, and Embarcadero de Baja.

The sitio consists of a small number of scattered houses and a store, 20 miles north of Mántua and 6 miles northeast of Dimas.

Santa Paula.—Sitio. A store and 2 or 3 houses about a mile northeast of Macuriges.

Baja.—Sitio. Situated 25 miles by road north of Mántua, 11 miles northeast of Dimas, and 2 miles from Embarcadero de Baja. It consists of 2 houses and a store.

Embarcadero de Baja.—Sitio. Situated on Ensenada de Baja about 25 miles north of Mántua. Consists of a brickyard and 4 houses. No store, and no facilities for shipping.

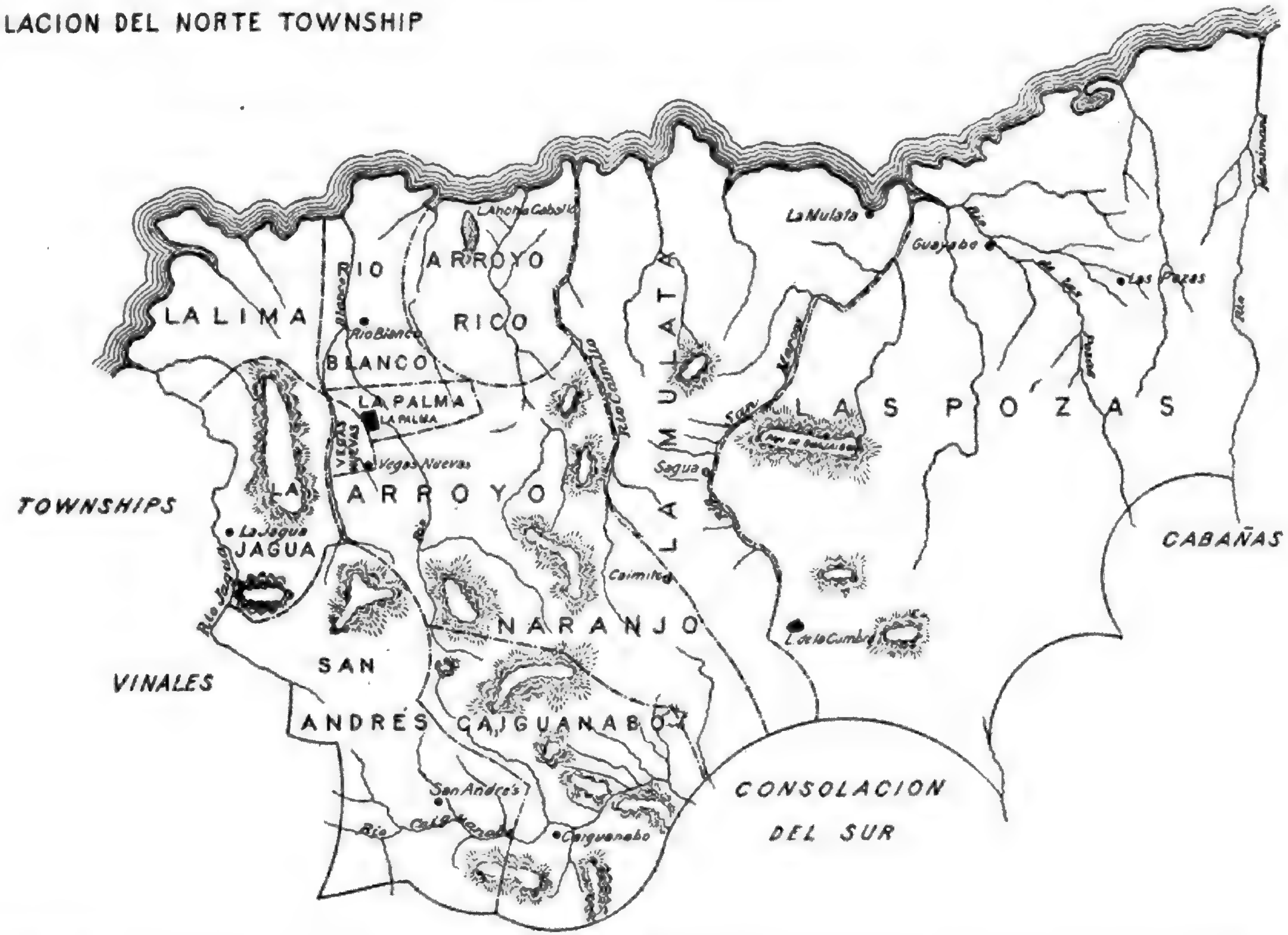
Montezuelo.—Barrio and sitio. The barrio is a district southeast of Mántua. The sitio consists of 2 stores, situated about 4½ miles south of Mántua, and several huts scattered along the trail for about a mile. The stores obtain water from a well and the other houses from Montezuelo River. There is a good camp site in the vicinity. The valley in which the sitio is situated is a circular basin about 1½ miles in diameter, surrounded by low hills. It was the scene of a battle between General Maceo and a Spanish column in 1897, in which the Spanish troops were forced to retire toward Mántua. The position occupied by General Maceo's forces was on a low ridge, which is about one mile long, running northeast to southwest; it commands the entire valley, and is backed by another ridge which is timbered.

Santa Isabel.—Barrio and village. The barrio is northwest of Mántua. The village is situated about 6 miles northwest of Mántua and 2½ miles from the coast. Large store in the village. There are two others built of wood, with thatched roofs. Good water is obtained from a creek 200 yards east of the store.

JUDICIAL DISTRICT OF PINAR DEL RÍO.

Township:	Population.
Consolación del Norte	11,471
Consolación del Sur	28,819
Pinar del Río	50,071
San Juan y Martínez	19,807
San Luis	11,092
Viñales	16,840

CONSOLACION DEL NORTE TOWNSHIP



TOWNSHIP OF CONSOLACIÓN DEL NORTE (CAPITAL, LA PALMA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
La Palma	La Palma	Rural and urban.		1,072
Caimito	Arroyo Naranjo	Rural	0.5	736
	Arroyo Rico	do	5	1,303
Caiguanabo	Caiguanabo	do	12	474
La Jagua	La Jagua	do	6	1,341
Berracos	La Lima	do	4.2	1,830
La Mulata	La Mulata	do	17.5	671
Sagua.				
Las Pozas	Las Pozas	do	23	1,170
Cochinito.				
Corralillo.				
Guayabo.				
Río Blanco	Río Blanco	do	2.5	534
San Andrés	San Andrés	do	9.5	1,523
Vegas Nuevas	Vegas Nuevas	do	1.5	817

La Palma.—Barrio and town. The town is situated 24 miles northeast of Pinar del Río city in the valley of the La Palma River. Surrounded by hills and within easy rifle range from higher ground on all sides. The town is 5 miles south of Río Blanco, which is on the northern coast. It is well built, a number of the buildings being constructed of brick and cement. There is a post-office, telegraph office, hotel, 2 restaurants, and a number of large tiendas. The majority of the dwelling houses are small and built of wood. Principal industry, tobacco. The town was formerly known as Consolación del Norte.

Population, about 800.

Water supply: Good water is taken from streams that run through the town. The water should be taken from the streams above the town site.

Barracks: One large building near hotel, three-fourths of a troop; hotel, one-fourth of a troop; adjoining tienda could be used for a quartermaster and commissary storehouse; the church, 75 by 40 feet, for a hospital. The rural guard cuartel would quarter about 15 men. All buildings in sanitary condition and lighted by acetylene gas; in good repair.

Corrals: A small stable at rural guard cuartel. Suitable ground for camp and corrals northwest of town, or on the low hills to the north commanding the town. Water supply from La Palma River, but as this site is below the town, precautions would have to be taken against pollution. Wood and grass plentiful.

Camp site: The best camp site in the district is on the Río Blanco about 2 miles northwest of La Palma. There is abundance of grass, high ground, and plenty of excellent water. One of the roads to Berracos crosses the river at this point. In fact all along this river good camping places may be found.

Roads leading out of town: To Embarcadero Río Blanco, Esperanza, Viñales, San Andrés, and Bahía Honda.

Line of approach: The best line of approach is from the north and northwest, with Esperanza as a base. There are more good roads in this direction, and although the country is hilly, it is not difficult. The hills north of the town command it and if occupied would render it untenable.

Arroyo Naranjo.—Barrio. Contains the sitio of Caimito.

Caimito.—Sitio. Consists of four tobacco farms in the very heart of the mountainous district, about 10 miles east of Consolación del Norte and 12 miles north of San Diego de los Baños. It is surrounded on all sides by hills, which command it, and such portions of the ground as have not been cleared for purposes of cultivation are covered with a dense, impenetrable undergrowth. It has a population of about 50, of whom one-third are negroes. Nearly all the men took an active part in the insurrection of 1906. Water supply is obtained from a small stream about one-half mile distant, whence it is hauled on sledges. The water is of good quality and abundant. Two large tobacco barns on the plantation could be used for purposes of storage or shelter, and for the latter purpose would accommodate a company each in bivouac. The so-called "Camino Real" runs through the sitio, connecting it to the south with San Diego de los Baños and to the north with La Mulata; a trail also extends to Consolación del Norte to the west. Tobacco raised here is marketed in Havana, where it is taken on pack mules via said Camino Real.

Arroyo Rico.—Barrio. A district northeast of La Palma. No point or village bearing the name in the district.

Caiguanabo.—Barrio and sitio. The barrio is a district lying southeast of La Palma. The present sitio of Caiguanabo is in the valley of the San Diego River, just south of the mountains and is 18 miles nearly due north of Consolación del Sur. It was once an important tobacco center, but was burned to the ground during the revolution of 1896 and has never been rebuilt. In the vicinity of the site of the old town there are three small tobacco farms. On these farms are 3 or 4 tobacco barns which might be used as temporary shelter for troops or supplies in an emergency, but otherwise they present no military features worthy of note.

The town of San Andrés is about 5 miles to the west. This locality is especially important in that it affords one of the best camp sites in this region. The water from the San Diego River is of excellent quality and abundant, and there is plenty of standing timber for use as fuel. There is much meadow land in the valley which affords excellent grazing. There are trails leading out of Caiguanabo to Consolación del Sur, La Palma, San Diego de los Baños, and San Andrés. All of these except the last are impracticable for any but pack transportation. There are no railroads, telegraph, telephone, or post-offices in this vicinity.

La Jagua.—Barrio and sitio. A district lying southwest of La Palma. Besides the sitio there are numerous houses scattered about the district. The sitio consists of a store, a schoolhouse, and 4 or 5 wooden houses, and is situated about 6 miles from La Palma on road to Viñales.

La Lima.—Barrio. A rural district lying northwest of La Palma and adjoining Río Blanco and La Jagua barrios. No point bearing name. Contains sitio of Berracos.

Berracos.—Sitio. Situated 7 miles by road northwest of La Palma and one-half mile from the Bay of Berracos at the foot of a low line of hills. It consists of 2 stores and several scattered houses, none of which would be of any military service. There is no wharf and only flat bottom boats can enter the bay. Depth of water is about 10 feet.

La Mulata.—Barrio and village. This barrio is a district lying north of La Palma and contains the sitios of La Mulata and Sagua. The sitio of La Mulata is more strictly speaking a community of small tobacco farms. It is situated on the north coast of the province of Pinar del Río, about 20 miles west of Bahía Honda. There is a small harbor on the coast at this point which can be entered by vessels of a draft not exceeding 15 feet. The harbor is of little value, however, as there are no wharves and the place contains no lighters or other means of transporting passengers or supplies from ship tó shore. There is a sandy beach, which affords good places for landing troops or supplies in small boats. The population of the surrounding farms is estimated at about 150. The water supply is hauled in carts from the Río La Mulata. There is no sewer system. There are no buildings suitable for military purposes; no post, telephone, or telegraph offices. There are various sites in the vicinity suitable for camping small commands, but the dense undergrowth would render it difficult to camp more than a company in one place. There is no good grazing in the immediate vicinity. There are two trails leading out of the village; one south to San Marcos, and one east to Las Pozas. It would be hardest to defend the place from the sea.

Sagua.—Sitio. A small farm situated about 6 miles north of Caimito and about 3 miles to the east of the main trail. There are about 15 acres of land under cultivation, on which are raised corn and tobacco. There are no buildings of any military importance, the natives living in small palm huts. There are no means of communication except the small trail leading from the Camino Real.

Las Pozas.—Barrio and sitio. The barrio is a district lying northeast of La Palma. Besides the sitio bearing its name it contains the sitios Cochinito, Corralillo, and Guayabo. The present sitio of Las Pozas is the ruins of what was once an important little tobacco center about 10 miles west of Bahía Honda and 7 miles from the coast. The only industry at present is tobacco raising, which is engaged in on a small scale in the near-by fields. There are only 5 houses standing at present and these are of a most primitive character, being constructed of palm. The present population is about 40. The water supply is taken from the Río Las Pozas, a rather swift flowing mountain stream. In January (1907) this stream was about 12 feet wide, averaged 4 inches in depth, and had about a 4-mile current. The water was cool, clear, and of excellent quality, and the supply seemed to be inexhaustible. There is no sewer system, and the natives seem to take no steps toward the proper disposal of waste matter; filth of all kinds was found lying in the roadway and around their houses in putrid, reeking cesspools. There are no buildings of any kind suitable for military purposes. There is no telephone, telegraph, or post-office. There are good camp sites along the Río Las Pozas to the north of the sitio. These camp sites are some 20 feet above the river bed, are dry and healthy, and are sufficient in size to accommodate a regiment or more. Water supply from river, excellent; standing timber in vicinity for fuel, or for purpose of bridging stream, abundant. Large rolling meadows to the east would afford excellent grazing. There are no railroads or fortifications in this vicinity. The road to the east leads to Bahía Honda; that to the west to La Mulata. Both of these roads showed signs of having been used by ox carts, but even in the dry season of the year they would be found difficult for any other class of wheeled transportation, and in the rainy season practically impassable for any kind of transportation. There is also a small trail to the north to the small fincas of Morillo, F. del Agua, Corralillo, Dos Amigos, Cochinito, Guayabo, and Papayal. These fincas are all very small, the largest having no more than two or three small palm huts. They have no value from a military standpoint. Las Pozas would be hardest to defend on the east side.

Cochinito.—Sitio. A small farm situated about 8 miles south of west of Bahía Honda. On this farm are a few small native shacks, none of which would be of any use for military purposes. The native residents are engaged in cattle raising, and in January, 1907, there were about 200 head of cattle on the farm.

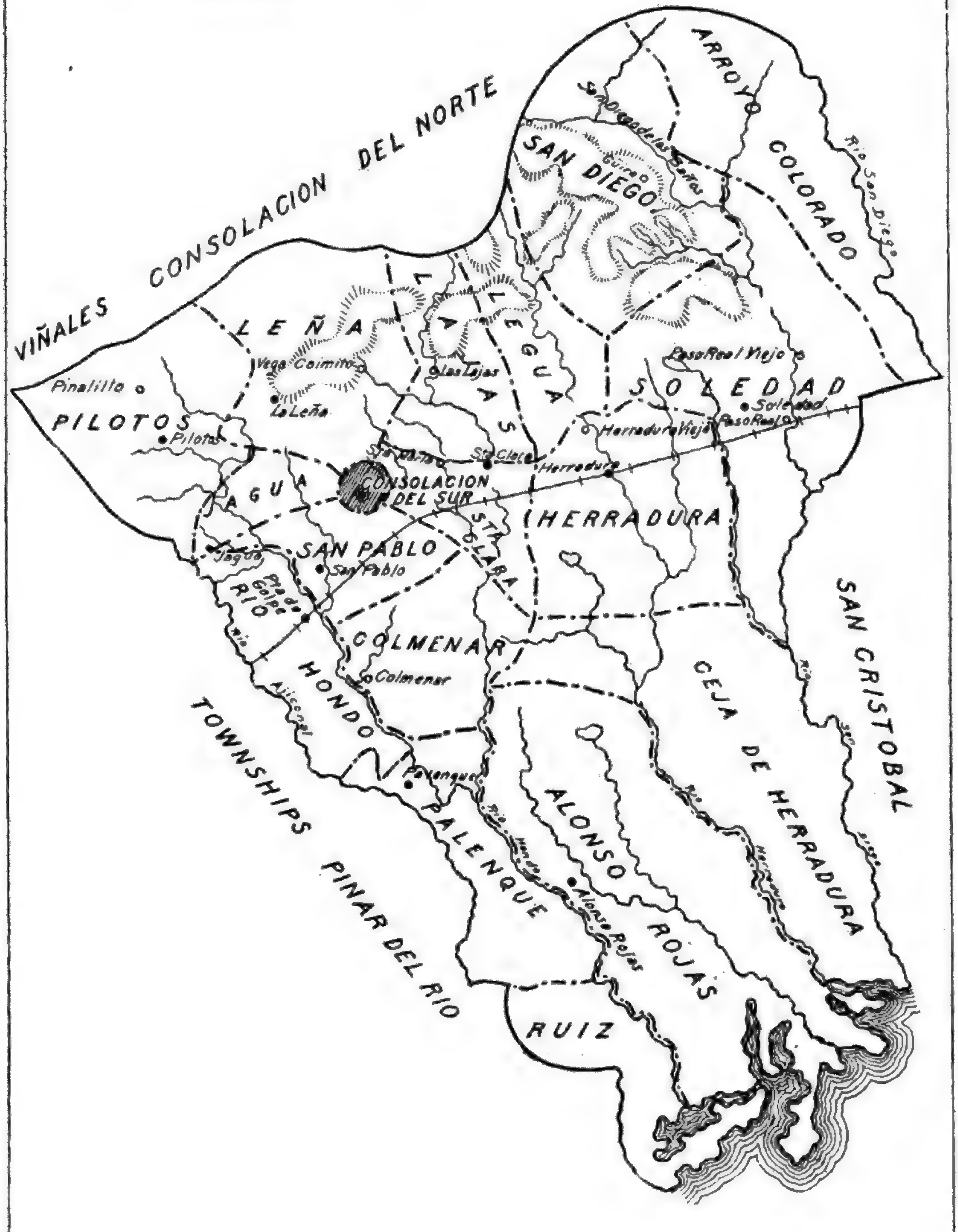
Corralillo.—Sitio. Consists of a store situated 9 miles west of Bahía Honda on the main road leading north from Las Pozas. There is little wood or water in the vicinity, and the only military feature worthy of note is that at the time this place was visited there were about 1,000 cattle herded in the vicinity.

Guayabo.—Sitio. A small cattle ranch lying about 8 miles slightly south of west of Bahía Honda and north of Las Pozas. The buildings on the farm are small and of native construction and would serve no military purpose. There are about 150 head of cattle and some 20 head of sheep on the farm.

Río Blanco.—Barrio and sitio. A district lying north of La Palma, of which point the sitio of Río Blanco is the seaport. The sitio consists of a store, a schoolhouse, and 2 or 3 dwellings. It is situated on the main road connecting La Palma with the north coast. The embarcadero of Río Blanco is 2½ miles to the north of Río Blanco. A calzada is being constructed from the embarcadero to La Palma (1907).

San Andrés.—Barrio and village. The barrio is a district lying south of La Palma. The village of the same name is about 18 miles north of Consolación del Sur. It is in the valley of the San Diego River and can be reached by trail from Consolación del Sur. This trail is very rough, however, and only pack transportation can be used on it. In the village there are about 40 houses, nearly all of which are situated on one main street. The principal industry is tobacco growing. The tobacco raised is sold in Havana, being sent there by pack train. The population of the village is about 300, of whom approximately one-half are negroes. The water supply of the village is obtained from the San Diego River, whence it is hauled in carts, a distance of one-half mile. All refuse is hauled away from the village in carts and deposited at a distance of some 3 miles. The streets and houses appear reasonably clean. A few houses are lighted by acetylene gas, and the balance are lighted by coal oil. The building occupied by rural guard would make suitable temporary quarters for one company. In connection with this building there are suitable stable accommodations for 15 animals. There is one large tobacco warehouse that could be used in emergency for purposes of storage, or for the temporary shelter of troops. Two companies could be quartered in this building. Open ground south of the village affords many suitable places for camp grounds, the San Diego River affording an inexhaustible and a very good supply of water. Wood is not very abundant in this vicinity, and a large column encamped for any length of time would soon exhaust the supply. In this same locality there are large tracts of rolling country suitable for grazing. There is no railroad, telegraph line, tramway, or ice plant in this vicinity. There is one long-distance telephone, in the general store owned by Diaz & Bros., connecting with the town of La Palma (Consolación del Norte). There is one trail to Consolación del Sur; one to the north crosses the mountains and leads to La Palma and one trail to the east leads to San Diego

CONSOLACION DEL SUR TOWNSHIP



de los Baños. All of these trails are very rough and steep, and under the most favorable circumstances could be used only by pack trains. From the débris found in trees and brush wood at various points on the trails to San Diego de los Baños and to La Palma it was noted that during the rainy season these trails were at times 2 to 3 feet under water. There are no defenses of any kind in the vicinity of the village and it could be most easily taken by assault from the south.

Vegas Nuevas.—Barrio and sitio. The barrio is a farming district, southwest of and adjoining La Palma barrio. The sitio consists of a store and a brick residence and 2 or 3 houses of native construction. Situated on the road to Viñales 1 mile southwest of La Palma.

TOWNSHIP OF CONSOLACIÓN DEL SUR (CAPITAL, CONSOLACIÓN DEL SUR).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Consolación del Sur	Villa (Consolación del Sur)	Urban		3,414
Alonso Rojas San Francisco de las Vegas.	Alonso Rojas	Rural	13.1	1,342
	Arroyo Colorado	do	15.6	890
	Ceja de Herradura	do	15.6	382
Colmenar	Colmenar	do	5.7	576
Herradura Herradura Vieja.	Herradura	do	7	1,014
Jagua	Jagua	do	5.3	1,177
Las Lajas	Lajas	do	6	1,733
	Legua	do	8	2,077
La Leña Caimito.	Leña	do	3.2	1,404
Palenque	Palenque	do	8	1,016
Pilotos Piñalillo.	Pilotos	do	6.8	3,559
Puerta de Golpe	Río Hondo	do	5.6	4,653
	Ruiz	do	18.7	550
San Diego de los Baños La Guira.	San Diego	do	14.6	1,668
San Pablo	San Pablo	do	3	1,459
Santa Clara Santa María.	Santa Clara	do	4	1,128
Soledad Paso Real. Paso Real Viejo.	Soledad	do	12.5	777

Consolación del Sur.—Barrio and town. The barrio lies northeast of Pinar del Río city and includes the town of Consolación del Sur.

The town is situated 14 miles northeast of Pinar del Río city. It contains 3 bakeries with a capacity for a total daily output of about 900 pounds of bread. They are at No. 25

calle Martí, southeast side between Santiago and Ubieta. capacity 200 pounds; No. 22 calle Cervantes, capacity 500 pounds; and No. 33 calle Cruz Vichot, southeast side between Acosia and Sur, capacity 200 pounds. There is practically no fresh meat on hand, a daily supply being obtained from Havana. About 500 cattle and 50 sheep in the vicinity. Small supply of flour at bakeries. Vegetables are scarce. For freight purposes there are 8 two-wheeled carts with a capacity of about 1,500 pounds each. There are 2 drug stores, one at No. 6 calle Sur, southeast side between Martí and Cruz Vichot, and one at No. 21 calle Cruz Vichot, southeast side between Sur and Acosia streets. There is a blacksmith shop at No. 40 calle Martí, northwest side between Santiago and Ubieta; one at east corner of calle Cruz Vichot and calle Cervantes, and one at No. 71 calle Cruz Vichot, southeast side between Dolores and Elijes Cruz. Rope, canvas, lumber, and nails can be obtained in small quantities at No. 65 calle Martí, southeast side between Maceo and Perseverancia.

The population is 3,414.

There is no water system. Most of the houses have cisterns of rain water, sufficient for their immediate needs. There is a creek 1 mile north of town that furnishes a liberal supply of good water. It is collected in a reservoir and distributed about town in carts. There is sufficient water in the stream for a regiment of infantry, but it is a poor place to water stock. The only place to water animals is where the continuation of calle Perseverancia crosses the creek northwest of town.

With very few exceptions the buildings are of stone, brick, or adobe, with low, tiled roof and inner court. The only one suitable for use as a barracks is the building on the west corner of Martí and Ubieta. It will accommodate 160 men, has an abundant supply of good cistern water, and would also be suitable for use as a hospital or as a warehouse. The Ayuntamiento is on calle Cruz Vichot, opposite the park. The Hotel Lisardo is on the west corner of Sur and Cruz Vichot, and the Hotel Noqueroes is on the southeast side of Cruz Vichot between Sur and Acosia. They furnish indifferent accommodations for about 10 guests each. Of the remaining buildings, none are worthy of note from a military standpoint.

There is a small corral at the railroad station that will hold about 20 animals. It has earthen ramp for loading and unloading. No facilities for watering stock nearer than 2½ miles.

The hotel on the corner of calle Sur and Cruz Vichot would, on account of its large cisterns, probably be best adapted for hospital purposes, though it would not be large enough for more than 30 patients.

The railroad station is 2 miles from the center of the town. It has one warehouse with capacity of about 30,000 cubic feet, with 300 square yards of floor space. Capacity of sidings about 34 cars. Telegraph office at station. No other buildings there except shacks. Telegraph office and post-office at No. 5 calle Sur, northeast side, between Cruz Vichot and Ganez Poro.

The best camp site is north of town, near the reservoir. The number of troops that could camp here would be limited only by the amount of the water supply which, during the dry season, averages about 10,000 gallons per day. Wood is very scarce and at no place in town is a supply kept on hand, charcoal being used almost exclusively. Wood is cut at a distance of about 10 miles to the north and will be brought in to order in a day or more, depending on the amount required. The only standing timber in the immediate vicinity is the royal palm. Wood is sold by the caballo (60 pieces), and runs about 6 caballos to the cord. The country is open, rolling prairie for miles around, and the native animals seem to thrive on the grass which it affords in great abundance, the nutritive qualities of which, however, are of doubtful value for American stock. The best grazing is to be obtained north of town.

A good calzada, practicable for wagons at all times, connects the railroad station with the town.

Alonso Rojas.—Barrio and village. The barrio is a section of country containing the village of Alonso Rojas, and the sitio of San Francisco de las Vegas. The country is very low and during the greater part of the rainy season is inundated. The roads are fair in the dry season and can be used by wagon transportation, but after the first rain become impassable.

The village of the same name is about 14 miles southeast of Consolación del Sur, and has a population of 800. There is no telegraph or telephone station, no drug store, and no bakery. It contains, however, a church, schoolhouse, and ruins of a demolished blockhouse. All but 2 of the houses are constructed of palm, are small, and in bad repair. The place is of no military importance. The Río Hondo passes about 1½ miles west of the village, and the Río Rabaldra, a branch of the Río Hondo, is about 1½ miles west. Good camp sites can be found along the rivers during the dry season, and wood is plentiful. A road, practicable for wagons in dry season, leads north to Consolación del Sur.

San Francisco de las Vegas.—Sitio. Situated 12 miles southeast of Consolación del Sur and near the Herradura River. A settlement of 8 to 10 native huts. Near it are extensive pine woods and a sawmill.

Arroyo Colorado.—Barrio. A section of country of very little importance, situated northeast of Consolación del Sur. The land is not considered good for tobacco culture. Houses are much scattered and constructed of palm. The Río Palacios and Río San Diego form in part the boundaries of the barrio, and along them many good camp sites can be found. Pasturage in this part of the barrio is good and wood is plentiful. The roads are fair and practicable for wagon transportation throughout the dry season.

Ceja de Herradura.—Barrio. A section of country about 11 miles a little south of east of Consolación del Sur. The barrio is made up entirely of tobacco farms, although some sweet potatoes, malanga, and corn are also raised. Land along the rivers is said to be good tobacco land. The majority of the houses are constructed of palm. The Río Herradura runs through the barrio and the Río San Diego forms the eastern boundary. Numerous good camp sites exist along these rivers and pasturage is good. The roads are very poor and during the rainy season are almost impassable, due to the fact that the country is very low and in many parts marshy.

Colmenar.—Barrio and sitio. The barrio is south of Consolación del Sur and is made up of tobacco farms. It is traversed by the Río Hondo near its southwest boundary and the Río Santa Clara is its southeastern boundary. There are numerous good camp sites along both of these rivers and they contain an abundance of water at all times. Wood can be obtained along the Río Hondo for one dollar a cord. There are no houses in the barrio suitable for barracks or hospital. They are all small, are built of wood, and have thatched roofs. There is no telegraph or telephone communication. There are 10 two-wheel carts, about 600 cattle and 500 small stock. Pasturage is fair. Roads are good during dry season and practicable for pack transportation throughout the year. The sitio consists of one general store and a number of scattered houses and is 6 miles due south of Consolación del Sur.

Herradura.—Barrio and village. Besides the village of the same name the barrio contains the sitio of Herradura Vieja. The barrio is a section of country east of Consolación del Sur. The land is better suited to grazing than the raising of tobacco. Many good camp sites can be found along the Río Herradura. The village is an American colony situated 7 miles northeast of Consolación del Sur and has a station on the Western Railway of Havana. It has a population of about 300. Water supply is obtained from two wells, water being raised by a windmill. There is an American church, a schoolhouse, and a branch post-office. Telegraph station at railroad station. Much of the land in the vicinity is used for raising tobacco and vegetables. In addition, many thousand orange trees have been set out.

Herradura Vieja.—Sitio. A group of about a dozen houses, schoolhouse and store, about 2½ miles from Herradura. Water supply is obtained from Río Herradura. Houses are all of frame or palm construction and not suitable for military use. The road to Consolación del Sur and Paso Real is suitable for wagon transportation throughout the year, as is also the road to Guira via Las Nubes.

Jagua.—Barrio and sitio. The sitio consists of a general store situated 5 miles south and west of Consolación del Sur, on road to Pinar del Río.

Lajas.—Barrio and town. The barrio is a section of country lying about 15° east of north of Consolación del Sur. The land is suitable for raising tobacco, and there is good pasturage for cattle and many can be found throughout the barrio. The town has a population of about 900. The houses are small, in bad repair, much scattered, and unsuitable for military purposes. There is no telegraph or telephone station, post-office, railroad, hotel, drug store, or blacksmith shop. The mail is forwarded to either Consolación del Sur or Caiguanabo. Water should be boiled. Wood can be obtained from the hills about 5 miles away. Camping grounds are numerous, but small in area. The Río Santa Clara and Río de Legua run through the barrio, and good camp sites with plenty of water and wood can be found along these streams. The so-called mountains rise 2 miles north of Lajas, and these hills of about 1,500 feet elevation form a screen behind which the Cubans operated against the Spanish garrison in Consolación del Sur.

Legua.—Barrio. A section of country consisting entirely of tobacco farms. It is about 7½ miles northeast of Consolación del Sur. There are 2 small stores in the barrio. It is of importance on account of the many fine farms. The tobacco raised is of good quality, but most of it is raised only for the seed, which is sold at high prices. The Río de la Legua, the Río Medio, and the Río Corralito, tributaries of the Río de la Herradura, pass through the barrio, and there is excellent pasturage and plenty of water and wood. Cattle are found throughout the entire barrio. No telegraph or telephone station exists within its limits. The road to Herradura, the only cart road in the barrio, is said to be practicable for wagon transportation throughout the year.

Leña.—Barrio and sitio. A section of country northwest of Consolación del Sur, devoted to the raising of tobacco, and there are practically no cattle in the vicinity. The Río Leña and the Río Sitio, tributaries of the Río Hondo, pass through the barrio and contain water throughout the year. Many good camp sites can be found along these rivers and wood is plentiful. The barrio contains many tobacco farms, and the sitios La Leña and Caimito. The sitio is about 4 miles northwest of Consolación del Sur, on the cart road leading from Consolación del Sur to Pilotos. It consists of 2 stores, a schoolhouse, and a number of scattered houses. There is no telegraph, telephone, or post-office.

Caimito.—Sitio. Consists of a house situated about 4 miles north of Consolación del Sur. It is connected by mountain trail with San Diego de los Baños, La Catalina, and San Marcos. Old maps erroneously show it as a town or point of some magnitude.

Palenque.—Barrio and sitio. The barrio is southeast of Consolación del Sur and is made up entirely of tobacco farms. There are two small stores in the barrio. The Agiconal and Hondo rivers, which flow the entire length of the barrio, furnish an abundance of excellent water throughout the year. There are 10 two-wheel carts and about 1,500 cattle in the barrio. Pasturage is good. Roads are very poor. Good camp sites may be found along the Hondo and Agiconal rivers, with plenty of water and wood. Wood sells for $2 Spanish gold per cord. No fortifications or trenches of any kind are found in the barrio. Tobacco, malanga, and sweet potatoes are raised. No telegraphic or telephonic communication exists. The sitio consists of a general store and about 5 houses, and is about 8 miles south of Consolación del Sur, with which it is connected by a wagon road via Puerta de Golpe.

Pilotos.—Barrio and village. The barrio is west of Consolación del Sur. Outside of the village of Pilotos the houses in the barrio are small and are constructed of wood or palm leaves. Water is obtained from springs and the Río Hondo and its tributaries, which furnish an abundant supply throughout the year. The roads of the barrio are generally poor, though native carts have no difficulty in getting over them in the dry season. The roads to Pinar del Río, Consolación del Sur, Puerta de Golpe, and Viñales are practicable for pack transportation throughout the year. There are 15 two-wheel carts and about 2,200 cattle in the barrio. Pasturage is good. Many good camp sites may be found along the Río Hondo, which flows through the barrio. Water and wood are abundant, wood selling for $1.80 per cord. No fortifications or trenches of any kind are found. Tobacco, sweet potatoes, and malanga are raised throughout this section. In the barrio are 2 hotels, a drug store, and a bakery, but no blacksmith shop. Besides the village bearing its name, the barrio contains the sitio of Piñalillo. The village of Pilotos is situated about 7 miles west of Consolación del Sur, 11 miles north of Pinar del Río, and about 1 mile south of the Río Hondo. Two or three large stores of brick and cement and a church of the same material constitute the principal buildings of the village. It has a population of about 400. The tobacco industry furnishes the principal employment. Water is obtained from a large well in the center of the plaza. It is not believed to be very good. The large stores mentioned above would be the only available buildings for barracks. Probably a troop could be quartered in the village. No more than this would ever be necessary. Roads run to Pinar del Río, Consolación, Puerta de Golpe, Viñales, and San Andrés. The best line of approach is from the west from Pinar del Río.

Piñalillo.—Sitio. A small place about 1 mile north of Pilotos, on the Arroyo de la Cantera, a branch of the Río Hondo. A good camp site is found here; water is excellent and abundant, wood plentiful, and grazing fair.

Río Hondo.—Barrio. A district southwest of Consolación del Sur between the rivers Hondo and Agiconal. It is made up of tobacco farms. There are a number of general stores situated in it, and there are two drug stores and a blacksmith shop. The only point worthy of mention is Puerta de Golpe. There are no houses suitable for hospitals or barracks. Pasturage in greater portion of the barrio is poor, only the "pajón" and "espartillo" grasses being in evidence. There are over 4,000 cattle and pigs in the barrio. Roads are exceedingly bad during the wet season. Many good camp sites may be found along the rivers Hondo and Agiconal. There is an abundance of water in these rivers at all times. Wood is scarce, costing from $8 to $10 a cord.

Puerta de Golpe.—Village. Situated 9½ miles northeast of Pinar del Río city and on the Western Railway of Havana. Contains about 100 houses, several stores, a blacksmith shop, lumber yard, and railroad station. Near the station are two sidings with capacity for 50 cars. Water is obtained from a creek one-fifth of a mile south of the village. There is a good camp site along the creek. Important roads lead to Pinar del Río city and to Consolación del Sur.

Ruiz.—Barrio. This is a section of country made up entirely of tobacco farms. It lies about 18 miles to the southeast of Consolación del Sur. All articles of merchandise come from Havana by way of Coloma. The barrio is of very little importance on account of the absence of roads, but the land is said to be very productive. There is no hotel, telegraph or telephone station, bakery, or drug store in the barrio, and but one small general store. Good camp sites may be found along the rivers which pass through and form the boundaries of the barrio. Pasturage is good and wood plentiful. The roads are very bad and wagon transportation can not be used.

San Diego.—Barrio and village. A section of country in which are situated the villages of San Diego de los Baños and La Guira. The village of San Diego de los Baños is about 14 miles northeast of Consolación del Sur, and the population is about 600. The baths for which it is noted are about a mile away. The houses are well built and in good repair. There are several large stores, a church, a schoolhouse, two hotels, and a drug store. A number of the buildings, including the hotels and several private houses, are suitable for use as hospitals or barracks. There is no telegraph or telephone station in the village. The road leading to Paso Real is passable by wagon transportation throughout the year. The trails leading to Guira, Las Nubes, and the barrio La Sierra are practicable for pack transportation throughout the year. The trail to Bahía Honda, via La Catalina, Caimito (municipality of Consolación del Norte), La Mulata, Las Pozas, and San Miguel, is practicable throughout the year. It would be extremely difficult and possibly dangerous between San Diego and Caimito during the rainy season, and is hard to follow, as in a number of places it passes through fenced yards.

La Guira.—Village. At a crossroads, about 2½ miles southwest of San Diego de los Baños; consists of two stores and several houses; water obtained from a well with a windmill.

San Pablo.—Barrio and sitio. A section of country southwest of Consolación del Sur, and made up of numerous farms. The barrio is extensively cultivated; tobacco, sweet potatoes, and malanga are raised. The Río Hondo forms part of the boundary and the Río San Pablo, a tributary, flows through the barrio. Many good camp sites can be found along these streams and wood is plentiful. The sitio is 3 miles southwest of Consolación del Sur and consists of a small finca. There are no buildings suitable for military purposes.

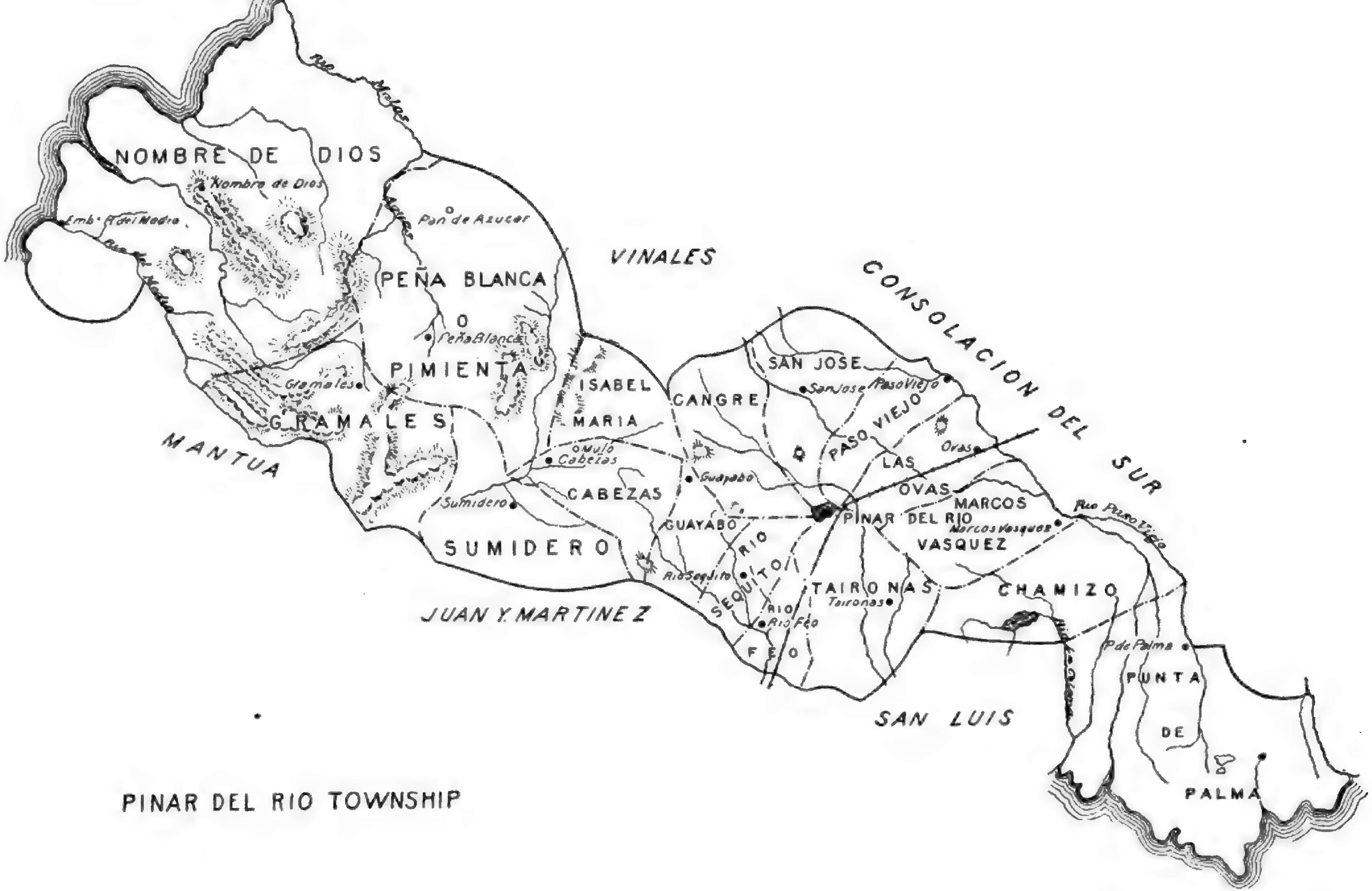
Santa Clara.—Barrio and sitio. A section of country southeast of Consolación del Sur. Land suitable for cattle raising. Good camp sites along the Río Santa Clara. The road leading to Guira, and the one leading to Las Nubes are practicable for wagon transportation. Besides the sitio bearing its name it contains the sitio of Santa María. The sitio of Santa Clara is a store, situated 4 miles northeast of Consolación del Sur, on the Consolación del Sur-Paso Real road.

Santa María.—Sitio. Consists of 5 small houses, 2 tobacco warehouses, and a small stable, on a tobacco plantation 3½ miles from Consolación del Sur. Population about 30. Well of good drinking water in front of principal dwelling house. No stores or workshops.

Soledad.—Barrio and sitio. A section of country northeast of Consolación del Sur. Land suitable for grazing. The Río San Diego runs through the barrio and many good camp sites can be found along it. The sitio consists of 2 houses situated 12 miles northeast of Consolación del Sur. Paso Real is the nearest telegraph station.

Paso Real.—Village. The proper name of this place is Julián Díaz. The old village of Paso Real is called Paso Real Viejo. Paso Real or Julián Díaz is about 21 miles southwest of San Cristóbal and is a station of the Western Railway of Havana. It has a good store and several small tiendas. There is also a frame freight house 40 by 60 feet and a siding for about 20 cars. Stock could be watered at the San Diego River. A road leads southeast to Coloma and one north by west to San Diego de los Baños.

Paso Real Viejo.—Sitio. Formerly a good sized village named Paso Real, which was burned some years ago and never rebuilt. It consists now of a small tienda and about a dozen shacks. It is now called Paso Real Viejo, and Julián Díaz is called Paso Real or Paso Real Nuevo.



PINAR DEL RIO TOWNSHIP

TOWNSHIP OF PINAR DEL RÍO (CAPITAL, PINAR DEL RÍO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Pinar del Río	Norte de la Ciudad	Urban		4,592
	Sur de la Ciudad	do		6,042
Cabezas	Cabezas	Rural	14	1,817
Mulo.				
	Cangre	do	4½	4,337
	Chamizo	do	9⅜	352
Gramales	Gramales	do	22	1,087
Guayabo	Guayabo	do	7	1,692
	Isabel María	do	10½	962
Marcos Vázquez	Marcos Vázquez	do	11	1,176
Nombre de Dios	Nombre de Dios	do	28	1,214
Embarcadero de Río del Medio.				
Ovas	Ovas	do	8	3,331
Paso Viejo	Paso Viejo	do	4	2,982
Pimienta de Peña Blanca.	Peña Blanca or Pimienta	do	21	2,106
Pan de Azucar.				
Punta de Palma	Punta de Palma	do	17	532
Río Feo	Río Feo	do	6	1,049
Río Sequito	Río Sequito	do	5	4,727
San José	San José	do	5	3,564
Sumidero	Sumidero	do	16	2,304
Taironas	Taironas	do	5	6,206

Pinar del Río.—Barrio and town. This district is in the center of the famous tobacco district, generally known as the Vuelta Abajo, and its principal industries are the growing, manufacturing, and shipping of tobacco.

The city is 110 miles west and south of Havana, on the Western Railway of Havana, and 15 miles from the south coast. It dates from 1571, when Melchor Rojas founded the ranch of San Felipe, and the corrals of Cangre, Guamá, Pinar del Río, and Cabezas. A post-office was established as early as 1834 and the first school in 1836.

The city is situated on the western slope of a low ridge, which rises above the surrounding country and reaches its highest point at Casa de Salud, a hospital supported by the Spanish colony, and which is situated at the extreme northwest corner of the city and about 150 yards northwest of the cuartel. The elevation at this point is 160 feet above sea level. The surrounding country is cultivated in tobacco.

From a sanitary point of view the location is excellent. Drainage is good, and with the completion of the large reservoir and extensive waterworks now in course of construction (1907), ideal sanitary conditions can easily be established and maintained.

The Río Guamá, a fine stream, flows by the eastern edge of the town.

Population, 10,634; number of buildings, 2,500; number of stores, 75.

Water supply: The present water supply is partly from wells and partly from a tank on the hill, 200 yards north of the cuartel. This tank is supplied by a steam pump situated on the bank of the Río Guamá, one-half mile north of the cuartel. The plant was built to supply the American garrison during the first intervention and was afterwards sold to the city. It furnishes a limited supply of water to the cuartel and buildings on the hill surrounding the water tower, Spanish Hospital, Hospital Civil de San Isidro, the hotels, and a number of private buildings, but is inadequate for anything like a general supply.

Fine permanent waterworks are in course of construction and will be in full operation by the end of May, 1907. It is a gravity system, the water coming from a cañon in the hills, 6 miles west of the cuartel, through a 12-inch main to a reservoir on the hill, 250 yards west of the cuartel. From here it will be distributed. This reservoir will have a capacity of 600,000 gallons. A substantial masonry dam has been constructed in the cañon where the water enters the main. The reservoir, a concrete structure, standing 14 feet above the ground and 200 by 100 feet, divided into two compartments, is completed; work is well advanced on the distributing pipe of the system. This will insure sufficient excellent water for a large number of troops. From any other source than this the water should be sterilized. This system could be easily interrupted and it would take a considerable force to protect it from a determined enemy.

Marching troops, by making camp at large tobacco plantations, can usually secure sufficient potable water, and mountain streams may be assumed to be pure.

There is an electric-light plant 1 mile northwest of the cuartel on the bank of the Río Guamá, which furnishes lights to all public buildings, hotels, the streets, and many private houses. The installation is not, however, general in private houses, acetylene being the more common.

Sewage is disposed of through open sewers and cesspools. Cesspools are constructed under the patios of nearly all private houses.

Barracks: The old Spanish cuartel, a two-story building, 240 by 240 feet, is situated on high ground at north side of city; capacity, 400 men. It is in very good repair. There are, besides, 4 wooden barracks just north of the cuartel, which were built by Americans during the first intervention. These buildings are in good repair and will shelter a battalion. There are also sufficient houses in immediate vicinity for officers' quarters.

Stables: The stables and corrals of the American troops are situated on the hills just back of the Casa de Salud, and about 250 yards northwest of the cuartel. The ground has good drainage. Seven wooden sheds have been built which will shelter altogether about 450 animals. Water at the present time is supplied from the pumping plant to galvanized-iron troughs placed near each shed. The Guamá River also furnishes abundance of good water for animals. It is ½-mile north of the corrals.

Hospitals: The Casa de Salud, Spanish hospital, situated on hill at northwest corner of the city; a masonry two-story structure, tile roof; capacity 24 beds. The Charity Hospital, situated at the west end of calle Martí, south side of street; capacity about 75 beds.

Buildings for storehouses: There are numerous warehouses and stores on calle Martí and near railroad station which could be utilized for storerooms of all kinds. Railroad freight depot at station.

Railroad station is situated at southeast corner of the city, near the calzada which leads to Coloma.

Post-office and telegraph office on calle Isabel Rubia, west side, near center of city. The National Bank of Cuba is opposite. Telegraph, post-office, and telephone central office are in the same building.

Ice plant is on right bank of Guamá River, near bridge, where road to Consolación del Sur crosses river.

Good camp sites for large commands on left bank of Río Guamá to the east and north of city. Grazing abundant on the rolling ground from 1 to 3 miles east and north of city. Wood scarce in this vicinity.

Defenses are as follows: Eighteen earthworks, 50 feet long by 4½ feet high, with sand bag revetments, surround the city and are so placed as to command roads in all directions. There are also 5 blockhouses, 12 by 12 by 14 feet high, walls filled with earth 15 inches thick. These earthworks and blockhouses are the defenses prepared during the revolution of 1906.

Cabezas.—Barrio and village. The barrio is a district lying west of Pinar del Río city. The village is compact and built around a crossroad, 1½ miles east of Sumidero.

Population, about 50.

The buildings, 5 in number, are good-sized brick buildings, the largest being 45 by 30 feet. All one story and in good repair. Sanitary conditions are those of the ordinary Cuban house. No modern water-closets. About 150 men could be quartered in the village. No sewer system. Acetylene gas in houses.

There are no good stables and no corrals. Open ground along the valley between Cabezas and Sumidero affords plenty of good ground for corrals and grazing for horses.

There are no hospitals, but buildings mentioned above might be used if they were cleaned. The store on southeast corner of crossroad has office of telephone running to Pinar del Río and Sumidero.

Wood scarce in valley but plentiful in near-by hills. Water, grass, and open ground in valley for brigade camp. There are no defenses, but graveyard would make a splendid one.

Roads lead out of village as follows: To the east to Pinar del Río; to the south to Mulo; and to the west to Sumidero. Most difficult to defend village from the east.

Mulo.—Village. Situated in a broad valley about 1 mile southeast of Cabezas, and has population of about 100. A small creek runs northward through valley and furnishes water supply. There is no sewer system, and no buildings suitable for barracks, stables, hospital, or storehouses. There is any amount of open ground along the creek which could be used for corrals, and grass and water for a regiment, but wood is scarce. There are no important offices, except tienda on southwest corner of crossroads, which is a telephone station on line Pinar del Río-Cabezas-Sumidero. Road to northwest to Cabezas, and trail east to Pinar del Río and San Juan. The east side would be hardest to defend.

Cangre.—Barrio. A district lying northwest of Pinar del Río city. The following-named tobacco plantations are in the barrio: Guamá, La Sabaneta, Caña Alta, Cerro, and La Ceja de Guamá.

Chamizo.—Barrio. A rural district lying southeast of Pinar del Río.

Gramales.—Barrio and village. The barrio is a rural district 25 miles from Pinar del Río city, slightly north of west. The village consists of a large store, bakery, and carpenter shop, all under one roof, and a number of native huts.

Guayabo.—Barrio and sitio. The barrio is a rural district lying west of Pinar del Río city. The sitio consists of 2 stores and a post-office. It is situated 7 miles west of Pinar del Río city.

Isabel María.—Barrio. It is a district northwest of Pinar del Río, in the Isabel María Valley, and is about 6 miles in length and 3 miles in width. There are 3 stores and 150 to 200 houses scattered over the district. One of the stores is known as Tienda La Jagua, and is 11 miles in direct line northwest of Pinar del Río and at the junction of three roads near the north end of barrio. An abundance of water can be obtained from Río Isabela the entire year. There are numerous camp sites; plenty of wood. The district is connected with the Santo Tomás Valley by trails which are practicable the year round for pack transportation.

Marcos Vásquez.—Barrio and sitio. The barrio is a district lying east of Pinar del Río city. The sitio consists of 3 stores at a cross roads on the Paso Viejo River at a point where river is crossed by a steel wagon bridge that is some 60 feet in length by 30 feet in height; about 10 miles from Pinar del Río city. No fords near; river banks steep, and destruction of bridge would make river a serious obstacle.

Nombre de Dios.—Barrio and sitio. The barrio is a rural district lying northwest of Pinar del Río city. Besides the sitio bearing its name, it contains Embarcadero de Río del Medio. The sitio of Nombre de Dios is 28 miles from Pinar del Río, on the Nombre de Dios River, at a point where the road running south from Santa Lucía crosses it; consists of three or four houses.

Embarcadero de Río del Medio.—Sitio. About 32 miles by direct line northwest of Pinar del Río, on the seashore, at Ensenada de Río del Medio, and 11 miles northeast of Dimas. The settlement contains about six houses. Boats do not enter Ensenada de Río del Medio, but lighters go out 1 mile.

Ovas.—Barrio and village. The village of this name is a railroad station 8 miles east of Pinar del Río. It contains 3 or 4 stores, a school, and several houses. Population, about 200. Río Paso Viejo, one-quarter of a mile from the village, furnishes the water supply. Good camp site along the river. Important roads lead to Pinar del Río and Consolación del Sur.

Paso Viejo.—Barrio and sitio. The barrio is a rural district northeast of Pinar del Río city. The sitio is 4 miles from that city on the main road to Consolación del Sur, at the point where it crosses the Paso Viejo River. There are 2 stores on opposite sides of the river, and a schoolhouse. The store on the east side of the river is known as Tienda Paso Viejo. There is a wooden bridge crossing the river at this point; about 175 feet long and 40 feet high; in poor condition.

Peña Blanca or Pimienta.—Barrio and village. The barrio is a district about 18 miles northwest of Pinar del Río city. The village, the proper name of which is Pimienta de Peña Blanca, though it is commonly called Pimienta and also referred to as Peña Blanca, consists of a schoolhouse and a number of scattered huts situated on the Peña Blanca-Malas Aguas road. The village of Pan de Azucar is in this barrio.

Pan de Azucar.—Village. Situated 18½ miles in direct line northwest of Pinar del Río. Consists of 2 stores and 15 or 20 scattered houses. Water obtained from Río Pan de Azucar.

Punta de Palma.—Barrio and village. The barrio is a district southeast of Pinar del Río city. The village consists of from 12 to 16 houses and is about 17 miles southeast of Pinar del Río city.

Río Feo.—Barrio and sitio. The barrio is a district southwest of Pinar del Río. The sitio consists of a store and one or two huts.

Río Sequito.—Barrio and village. The barrio is a district southwest of Pinar del Río city. The village consists of a store and a few houses, and is about 4¾ miles from city of Pinar del Río on the Pinar del Río-Río Feo road.

San José.—Barrio and sitio. The barrio is a district north of Pinar del Río city. The sitio consists of 2 stores and the masonry ruins of 3 or 4 houses on both sides of Río Paso Viejo, which is crossed by a fine steel wagon bridge at this point; bridge about 100 feet long and 30 feet above stream. River is also called Río San José at this point.

Sumidero.—Barrio and village. The barrio is a district southwest of Pinar del Río city.

The village is about 16 miles from Pinar del Río and 1½ miles west of Cabezas; is compact and is at the foot of a sierra which rises almost perpendicularly 200 feet. Population, about 150. Water supply from near-by creek. Two-story tienda has small rain-water tank 10 by 8 by 6 feet. No sewer system, and each house makes its own acetylene gas.

There are about 12 good-sized brick buildings, the largest being 55 by 30 feet, all one-story (except one tienda) and in good repair. Sanitary conditions are those of the ordinary Cuban house. No modern water-closets. Detachment of rural guard has poor and dilapidated shed, with stable room for 12 ponies. Plenty of open ground along creek that could be used for corrals.

Buildings mentioned above might be used for hospital if cleaned. They would make excellent storehouses. Tienda on southwest corner of crossroad has telephone office.

Wood scarce in valley but plentiful in near-by hills; water and grass and open ground in valley for brigade camp. Small brick blockhouse 15 by 10 feet in northeast corner of village; of no importance.

Roads leading out of village: East to Cabezas, north to Gramales, west to Luis Lazo, southeast to Mulo. Road to Luis Lazo reported impassable for wagon transportation; practicable for pack transportation throughout the year. Four arroyos cross the road between Sumidero and Luis Lazo. There are no bridges over these streams. With the exception of periods of a few hours' duration during heavy rains the streams are always fordable. From Sumidero to

San Juan y Martínez the road is reported impassable for wagon transportation; practicable for pack transportation throughout the year. No bridges between towns; very mountainous trail. From Sumidero to Baja on north coast, impassable for wagon transportation; practicable for pack transportation throughout the year; very mountainous trail.

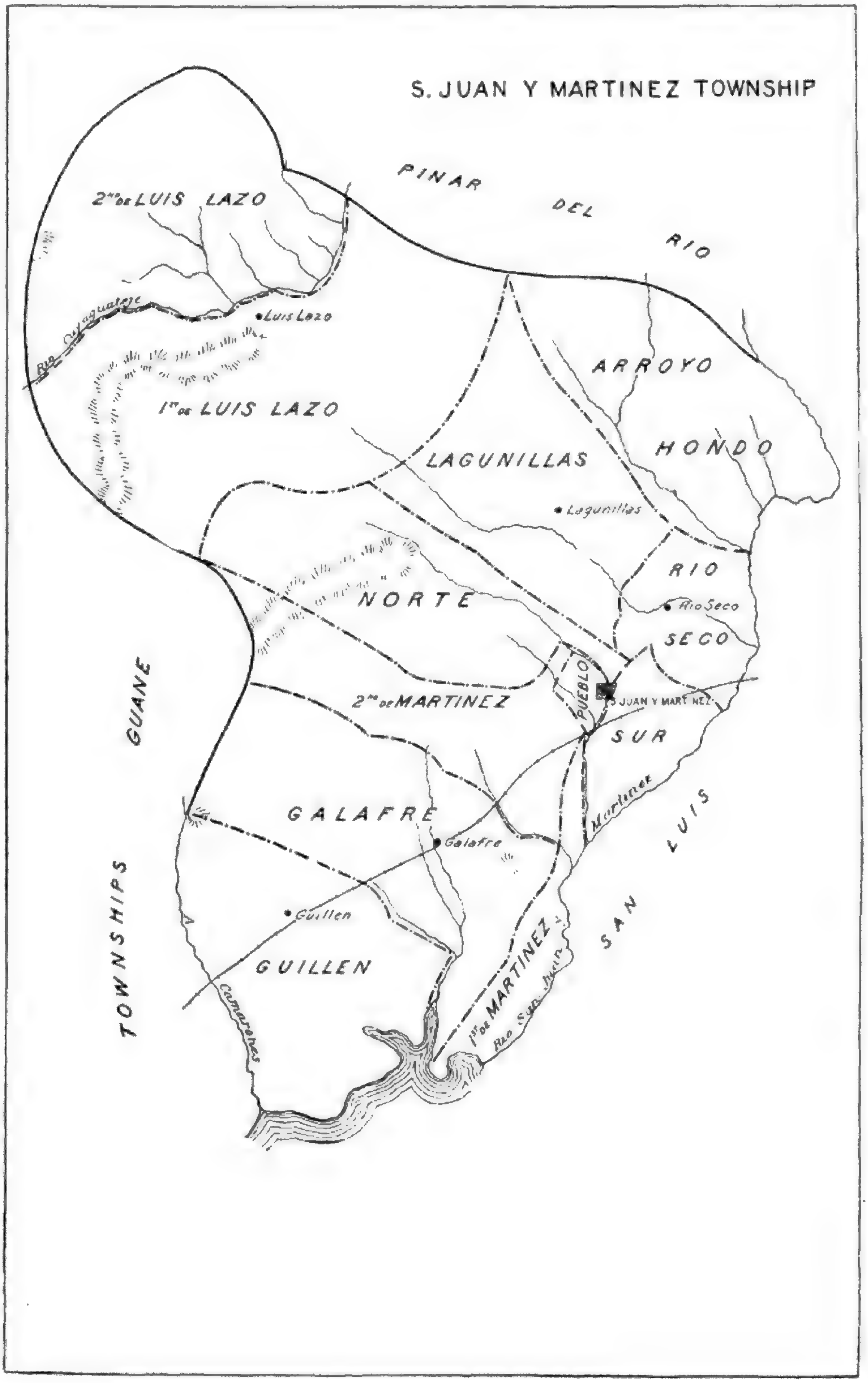
Taironas.—Barrio and sitio. A district lying south of Pinar del Río city. Besides the sitio of this name there is also another point in the barrio bearing the same name. It is situated at kilometer 8, Pinar del Río calzada. Consists of a store and tobacco fields scattered along west side of calzada. There is a target range about 400 yards east of the store, built by Americans during first intervention.

The sitio bearing the name of the barrio consists of a store and blacksmith shop, 5 miles southwest of Pinar del Río city, on the Pinar del Río-San Juan road. There is a large masonry dwelling on the hilltop 300 yards to the east of the store and on the south side of road.

TOWNSHIP OF SAN JUAN Y MARTÍNEZ (CAPITAL, SAN JUAN Y MARTÍNEZ).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
San Juan y Martínez	Pueblo (San Juan y Martínez).	Urban and rural.	....	2,486
	Arroyo Hondo	Rural	5.7	2,104
Galafre	Galafre	do	5.5	1,147
Guillén	Guillén	do	10	1,427
Langunillas	Lagunillas	do	3	1,214
	Norte	do	4.3	911
Luis Lazo	Primero de Luis Lazo	do	11.6	1,146
	Primero de Martínez	do	5.5	1,411
Río Seco	Río Seco	do	4	2,622
	Segundo de Luis Lazo	do	12.2	2,177
	Segundo de Martínez	do	3.6	1,733
	Sur	do	1.2	1,429

San Juan y Martínez.—Barrio and town. The town is situated about 23 miles northeast of Guane, 14 miles southwest of Pinar del Río city, and about 9 miles from the south coast, on the west bank of the San Juan River. The town is built on three streets, running approximately north and south, with five cross streets, running approximately east and west. The buildings generally are built of brick and cement, except on the extreme north and south sides of the town, where there are a number of native shacks. Along


S. JUAN Y MARTINEZ TOWNSHIP

the entire length of the main street the buildings are contiguous except in a few instances. Buildings all low, and one story in height. This town was completely destroyed during the War of Independence, but has been rebuilt and few signs of its destruction remain except here and there ruins of walls and old buildings. It is the center of the tobacco section. The headquarters of the American Tobacco trust for this part of the island are at Vivero, 1 mile north of the town.

Population, 2,486.

Water supply: From the San Juan River, which runs along the northern edge and through the eastern part of the town; an excellent water supply for all purposes. Water is brought into the town in large barrels.

Acetylene gas is very generally used.

Barracks: The church, a masonry building, with tile roof, 90 by 40 feet, will quarter 150 men. The rural guard cuartel will quarter about 20 men. By utilizing buildings of town a brigade of 3,000 men could be sheltered.

Stables: Stables would have to be constructed. Available ground for transportation corrals found within the town in any of the vacant squares. Best location outside of the town is near the river.

Storehouses: Storehouses and hospital could be obtained by use of some of the private dwelling houses, tiendas, or the church.

Railroad: The Western Railway of Havana has a station about a quarter of a mile out of town, on the east side of the river; passenger station, storehouse of good capacity, and sidings.

Offices: The post-office and telegraph office are in the same building, situated in the center of the town, on the east side of the main street. There is also telephonic connection with Pinar del Río. The ayuntamiento is on the main street of the town.

Camp sites: There are a number of good camp sites along the river, affording good grazing. A regiment could be camped in this vicinity and pastures allotted each squadron; the grass, however, would not last for any length of time, perhaps not more than a few days, and hay would have to be brought by rail. Vivero, the American Tobacco Company's plantation, would be the best place for camping a large force. It is situated one-half mile east of the town. Water supply from tanks; 2 pumps at the river. Troops could be quartered in the tobacco barn. A siding from the railroad runs to this point. Stable would accommodate horses of two troops. The heights on which Vivero is situated command the town.

Defenses: San Juan has a number of small blockhouses at different points around the town, also a number of sandbag entrenchments, all of which were constructed during the revolution of 1906. The town itself is on low ground, near the river, and surrounded by commanding hills from 100 yards to 1 mile distant, the hills on the north side being the farthest from the town. The blockhouses and trenches, for the most part, occupy commanding points and are generally within flanking distance of each other.

Roads lead out of town to Pinar del Río, San Luis, Guane, Luis Lazo, and Sumidero, and to Punta de Cartas, the seaport of San Juan Martínez. A carretera is now being built to the last-named point (1907).

Line of approach: The best line of approach is along the railroad from the east, after taking San Luis, which is about 5 miles to the east and a town of about the same size as San Juan.

Arroyo Hondo.—Barrio. A rural district. No place bearing the name.

Galafre.—Barrio and sitio. A rural district southwest of San Juan y Martínez. The sitio is on the Western Railway of Havana about 6 miles southwest of San Juan y Martínez. Water supply obtained from the Río Galafre. Sitio contains a store and 2 houses. There is a good camp site on the west side of the river for a regiment.

Guillén.—Barrio and sitio. The sitio is 10 miles by road southwest of San Juan y Martínez. It contains a general store and a few scattered houses.

Lagunillas.—Barrio and sitio. The sitio is 3 miles by road due north of San Juan y Martínez and is near the San Sebastián River. It contains a general store and several scattered houses.

Norte.—Barrio. A rural district situated a little north of west of San Juan y Martínez.

Primero de Luis Lazo.—Barrio and village. A rural district lying northwest of San Juan y Martínez and containing the village of Luis Lazo.

Luis Lazo.—Village. About 11 miles from San Juan y Martínez, and consists of 4 or 5 stores and a number of houses scattered along the San Juan y Martínez-Los Acostas road for about a mile. Principal industry, tobacco. Population about 75. Water is obtained from a small creek that runs through the barrio. One of the stores is built of brick, one story, 50 feet by 30 feet; in good repair. Sanitary conditions are those of the ordinary Cuban house. No modern water-closets. There are no stables and no corrals, but plenty of open ground near creek that could be used. In the store mentioned above is a telephone running to San Carlos and Sumidero. Sufficient grass and water for a camp site for two squadrons, but wood is scarce. There is an old wooden blockhouse on outskirts of village, on the trail to Sumidero, but it is of no importance. A trail leads east to Sumidero; roads south to San Juan, west to Punta de la Sierra, and north to San Carlos.

This point would be most difficult to defend from the west.

Primero de Martínez.—Barrio. A rural district lying a little west of south of San Juan y Martínez.

Río Seco.—Barrio and village. The barrio is a rural district lying northeast of San Juan y Martínez. The village is on a tobacco plantation belonging to the American Tobacco Company, 4 miles northeast of San Juan y Martínez, on the road to Pinar del Río. It contains a number of tobacco barns, 3 stores, and a number of houses. There is a masonry reservoir, 100 by 200 feet, on a high hill. It is used for irrigating purposes and is supplied from the Río Seco by means of a steam pump with an 8-inch intake and 6-inch outlet.

Segundo de Luis Lazo.—Barrio. A rural district northwest of San Juan y Martínez.

Segundo de Martínez.—Barrio. A rural district west of San Juan y Martínez.

Sur.—Barrio. A rural district southeast of San Juan y Martínez.

TOWNSHIP OF SAN LUIS (CAPITAL, SAN LUIS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
San Luis	San Luis	Urban and rural.		3,971
Barbacoas	Barbacoas	Rural	2.5	1,379
Barrigonas Punta de Cartas.	Barrigonas	do	6.5	1,330
Llanadas	Llanadas	do	7	678
Palizadas Coloma.	Palizadas	do	7	1,383
	Río Seco	do	2	936
Tirado	Tirado	do	4.4	1,415

San Luis.—Barrio and town. The town is situated 10 miles southeast of Pinar del Río city. It has a population of 1,533.

Water supply is obtained from Feo River, about 400 yards east of the town.

There are no buildings in the town suitable for quartering troops, except residences and one large church about 125 by 50 feet. No stables of any value. There is a warehouse, 150 feet long, at the railroad station. Two sidings at this point; no water tank.

Telegraph station and post-office on north side of main street, about center of town.

Good camp sites along the creek.

There are two blockhouses, one at east and one at west end of the town.

Roads lead out of the town to Pinar del Río city, San Juan, Río Seco, Punta de Cartas (seaport), and Salina, the salt works, 6 miles to the south on the coast.

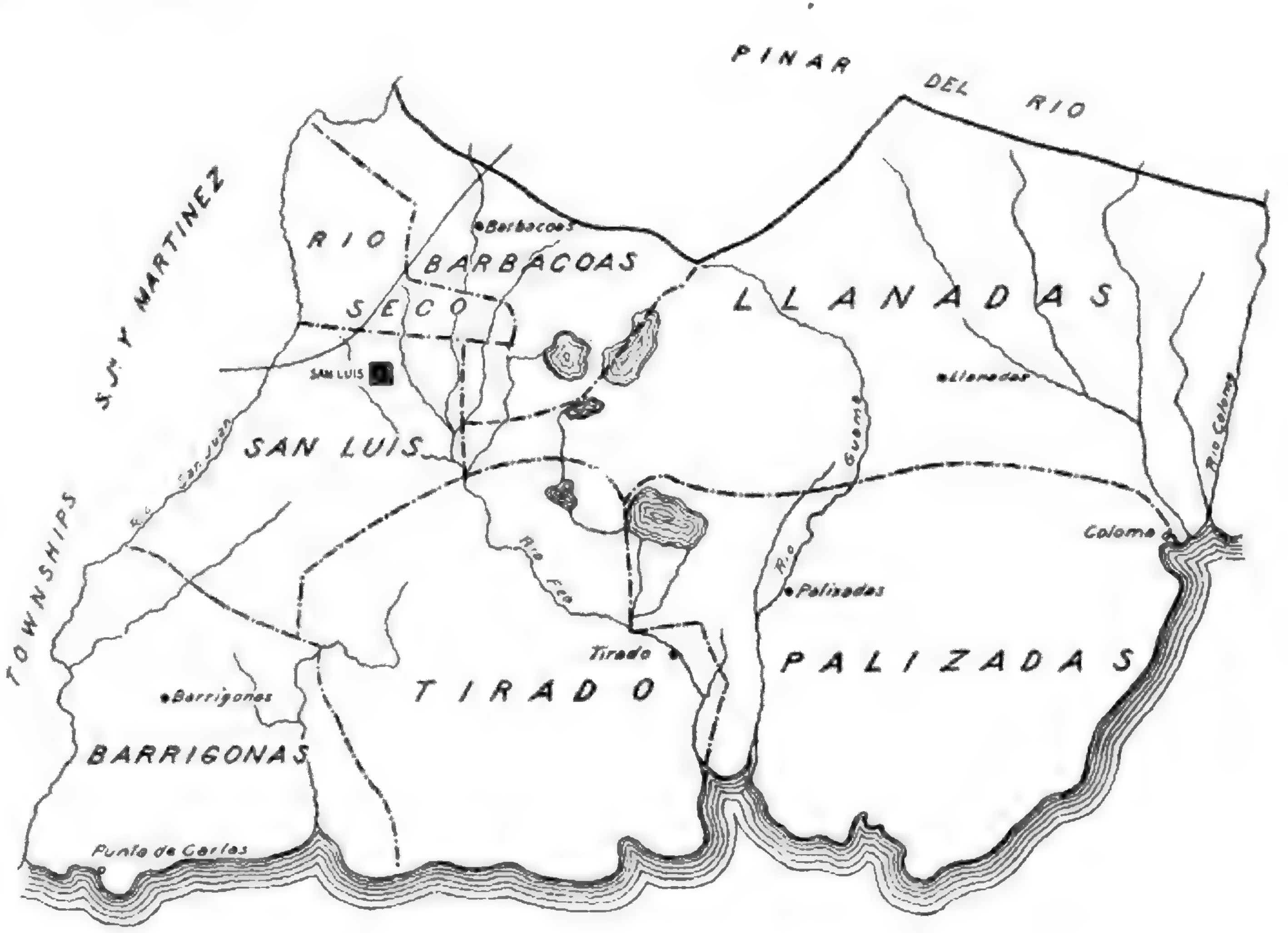
Barbacoas.—Barrio and village. The barrio is a rural district northeast of San Luis.

The village is 2½ miles northeast of San Luis and consists of a stucco storehouse, a tile factory, and numerous native houses scattered about. The railroad station of the village is Río Feo.

Barrigonas.—Barrio and sitio. The barrio is a rural district southwest of San Luis; contains the village of Punta de Cartas.

The sitio is known as Las Barrigonas and consists of a few scattered huts near the road running north from Punta de Cartas, on road to El Retiro, 16½ miles from San Luis.

SAN LUIS TOWNSHIP



Punta de Cartas.—Village. Ten miles by road southwest of San Luis and 8 miles south of San Juan y Martínez. It is the seaport for both of these towns. The road connecting it with San Juan is a calzada. It consists of about 20 houses, built along the beach, about 6 of which are built of wood and have tile roofs. There is a restaurant in one of the wooden buildings. There is a pier 225 yards in length, at the shore end of which is a wooden warehouse 140 by 40 feet, and on the outer end is a storehouse 30 by 50 feet. The two warehouses are connected by a tramway running along the pier. There are 3 narrow foot piers, 125 to 150 yards in length, running out to both houses. They would serve for landing places for small boats. Troops could not camp within 6 miles of the shore, owing to manglar.

Llanadas.—Barrio and sitio. The barrio is a rural district east of San Luis.

The sitio is a tobacco plantation, with a store and a number of native huts. Situated 7½ miles from Pinar del Río city, on good road connecting it therewith. Water is obtained from wells, and for troops can be obtained from Río Guamá, one-fourth of a mile west. Accommodations for a squadron.

Palizadas.—Barrio and sitio. The barrio is a rural district southeast of San Luis. Contains the village of Coloma and the point bearing the name of the barrio.

The sitio is on a ranch, and consists of a small store, a schoolhouse, and several native houses. Water from wells and Río Guamá.

Coloma.—Village. A seaport at mouth of Colón River, about 15½ miles southeast of Pinar del Río. Houses in the village are all small palm huts. There is a large warehouse and two tiendas. The warehouse is old and in poor repair, but could be put in suitable condition to quarter troops; could quarter one squadron. Wharf for small vessels at warehouse. There is a bar at the mouth of the harbor which prevents entrance of vessels of more than 3¼ feet draft. Larger vessels can anchor 1 mile from shore and then unload to lighters.

Population about 400, mostly negroes; occupation, fishing and charcoal burning. Water supply obtained from arroyos in the vicinity. No camp site available.

This village is of great importance to troops operating in or around the city of Pinar del Río, as it is the only point of supply in case the railroad should be destroyed. Impracticable to maintain troops constantly within the village, especially in spring, summer, and fall, on account of annoyance from a variety of small mosquitoes called "jejenes," a pest against which only nets made of cheese cloth will afford protection.

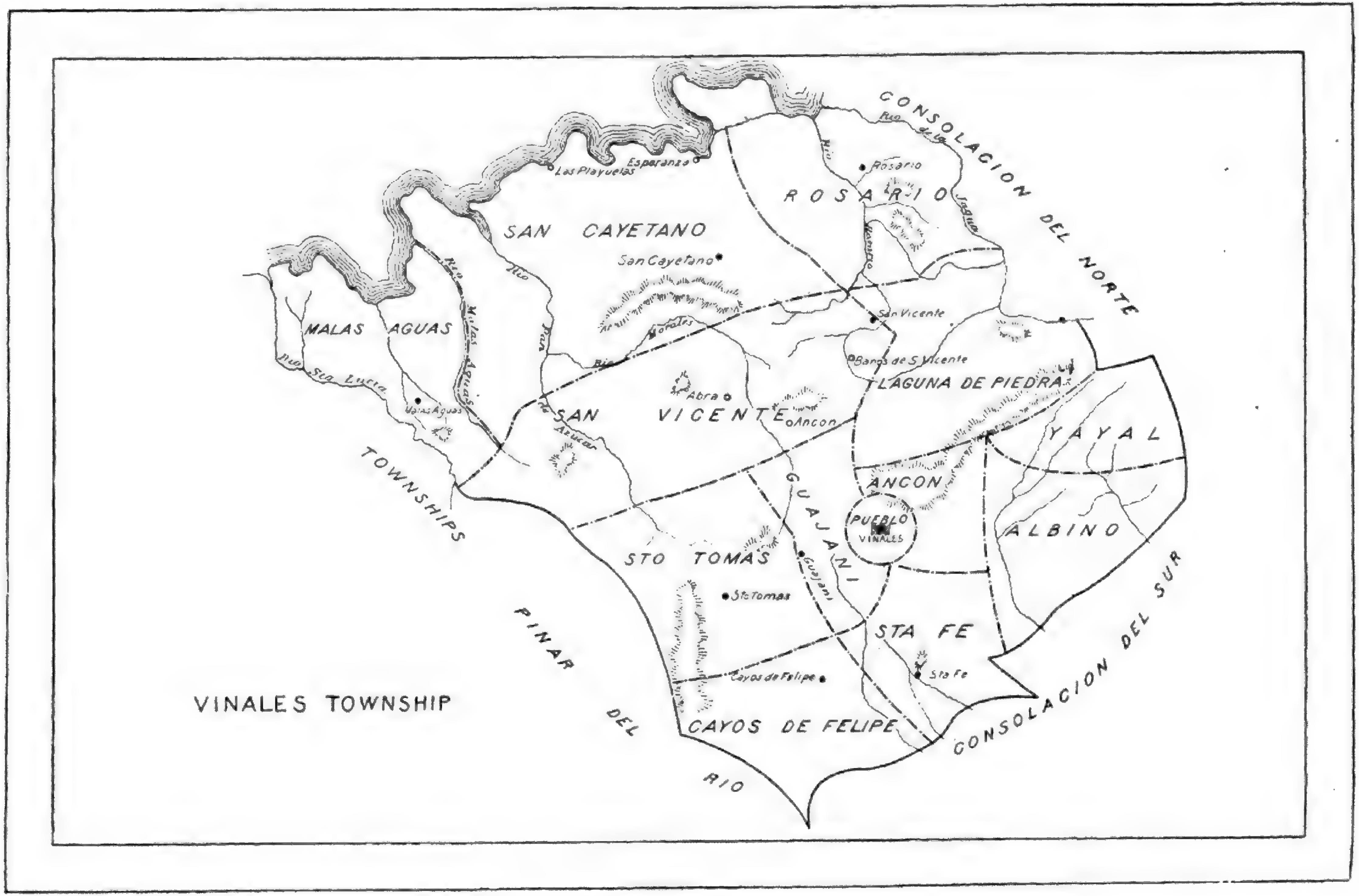
Río Seco.—Barrio. The barrio is a rural district northwest of San Luis. No point or village bearing the name in the district. This barrio adjoins a barrio of the same name in the municipality of San Juan y Martínez.

Tirado.—Barrio and sitio. The barrio is a rural district southeast of San Luis. The sitio is 4.4 miles southeast of San Luis and consists of two stores and a few scattered houses.

TOWNSHIP OF VIÑALES (CAPITAL, VIÑALES).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Viñales	Pueblo (Viñales)	Urban and rural.		1,425
	Albino	Rural	13	700
	Ancon	do	2	711
Cayos de San Felipe	Cayos de San Felipe	do	7	351
Guajaní	Guajaní	do	2.5	1,773
Laguna de Piedra	Laguna de Piedra	do	3	1,538
Malas Aguas	Malas Aguas	do	16	113
El Rosario	Rosario	do	12	1,686
San Cayetano La Esperanza. Playuelas.	San Cayetano	do	10	4,643
San Vicente Baños de San Vicente. Abra. Ancon.	San Vicente	do	5.5	2,173
Santa Fé	Santa Fé	do	3	397
Santo Tomás	Santo Tomás	do	10	881
	Yayal	do	7.2	449

Viñales.—Barrio and town. The town is situated near the base of a sierra, in a small valley, 16 miles north of Pinar del Río city. The town is completely commanded by high ground to the south and east, and within easy rifle range. Nearly all buildings are one-story brick or concrete structures. The largest and best building is the Spanish Club, a two-story building in perfect repair. The church stands in the center of the plaza near the Spanish Club.


VINALES TOWNSHIP

Population, 1,425.

Water is supplied by a 5-inch pipe running from a spring in the hills 2⅗ miles to the east. There are two water tanks about 12 by 15 feet each, which receive the water from the main. There are also a number of wells.

One mile east of the town is a good stream which affords abundance of good clear water, and there is a good camping ground along its banks.

No sewer system.

The Spanish Club and the church would afford ample quarters for 200 men, and the necessary storerooms. No shelter or stables for horses, but there is space in the vicinity for building.

The town receives its supplies from Pinar del Río to the south, and from Esperanza, its seaport, on the north coast.

The post and telegraph offices are in the same building, near the western end of calle Real.

The best method of attacking the town would be to gain the heights to the east and south, in which case the town would be untenable.

On the other hand, a defense against an attack from the south or east would have to be made on the same high ground, the best line of defense being about 1 mile south and east of the town. The passes through the sierras to the north would have to be guarded.

The following roads lead out of Viñales: To Pinar del Río; to Pilotos; to San Andrés via Ceja Ana de Luna; to La Palma via La Jagua and also via San Andrés; to Berracos via La Jagua and via El Rosario; to San Cayetano and Esperanza; to Abra and Malas Aguas.

Albino.—Barrio. A district east of Viñales and in the ancient stock-raising hacienda of Ceja Ana de Luna. No point or village bearing the name in this district.

Ancon.—Barrio. A rural district which adjoins Pueblo barrio on the east. There is no point bearing the name in the barrio.

Cayos de San Felipe.—Barrio and sitio. The barrio is a district lying south of Viñales.

The sitio of this name lies about 7 miles southwest of Viñales, and consists of 2 stores and a schoolhouse. There is also a post-office at this point.

Guajaní.—Barrio and sitio. A district lying southwest of Viñales. The sitio consists of 2 stores situated on the road, about 100 yards apart, and a number of houses scattered around the valley within a radius of half a mile.

Laguna de Piedra.—Barrio and sitio. A district in the hills northeast of Viñales.

The sitio consists of a store and 2 or 3 houses, situated on the road from Viñales to the port of Río Blanco, via Soledad, La Jagua, and La Palma.

Malas Aguas.—Barrio and sitio. The barrio is a rural district lying northwest of Viñales.

The sitio consists of a warehouse and 3 or 4 small native huts, situated on a wide-mouthed bay that indents 2½ miles inland. There are roads leading from this point to Pan de Azúcar, Gramales, Peña Blanca, and Santo Tomás. These roads connect with other points in the interior. A narrow-gauge railroad runs over a marsh to landing places.

El Rosario.—Barrio and sitio. A district north of Viñales and adjoining the barrio of San Cayetano.

The sitio consists of a store and several houses situated on the Esperanza-Río Blanco road, four-fifths of a mile from Esperanza.

San Cayetano.—Barrio and village. A district lying northwest of Viñales and adjoining the barrio of Rosario. Contains the village of the same name, the town of La Esperanza, and the village of Las Playuelas.

The village is situated on the north bank of the Arroyo San Cayetano, 10 miles north of Viñales, and is built on one street about one-sixth of a mile long, running northwest and southeast. Houses are of wood with tile roofs. There are 3 tiendas on north side of the street. The calzada crosses the street at right angles just north of the center tienda. Population, about 200.

Water supply is obtained from the Arroyo San Cayetano; water good and in sufficient quantity for any force that would be necessary at this point.

The tiendas are the best buildings in the village and could possibly accommodate a platoon of about 40 men. Conditions of repair good; sanitary conditions good. Good drainage throughout the village. Other less important buildings, now residences, could be used as storehouses.

The best camp site in the vicinity of the village is on the San Cayetano-Esperanza road a few hundred yards east of the village. The arroyo would furnish water for two troops if carefully used. Good drinking water. Sanitary condition of camping ground excellent; wood abundant; grazing facilities fair.

Roads lead out of village to Viñales, Esperanza, Dimas, and El Abra.

Best line of approach would be from the south, or, in case Esperanza were used as a base, from the north. The hills north of the village, which can be approached under fairly good cover, command the village, and if occupied would render it untenable. The place is of little importance from a military point of view, except as a guard for a large culvert on the calzada at this point, the destruction of which might temporarily interrupt transportation during the rainy season.

La Esperanza.—Town. The town is situated on a small bay on the northern coast, 17 miles north of Viñales. The harbor is good and affords anchorage and embarkation facilities for vessels not exceeding 15 feet draft. It is an important supply and shipping point, the most important on the northern coast, and the base of supply for the districts of Viñales, San Cayetano, Malas Aguas, Abra, and Rosario. The town is built on one street about half a mile long. The buildings are nearly all constructed of wood and have tile roofs; the large tiendas are built of brick and cement. Population, 1,159.

Water, obtained from wells, is of a very limited supply and very bad. There is no creek nearer than 1 mile affording drinking water that is not brackish and unpalatable. The Arroyo San Cayetano is the nearest water that is good.

The large tiendas are the only buildings suitable for barracks. The best is the large, two-story building where the first street turns off to the east. It is of brick and cement and would quarter a whole company comfortably. The fonda near by would accommodate a platoon. The best storehouses would be at the wharf; other buildings available.

If this place were held as a supply point it would be better to build another wharf and a large storehouse at the end of the street. There is plenty of space for such an undertaking. Sanitary conditions of the town and buildings apparently good.

There are no good camp sites or places available as transportation corrals in the vicinity, owing to lack of water. Defenses consist of 5 blockhouses.

Esperanza was the terminus of a narrow-gauge railroad between the coast and Viñales. This railroad was destroyed some time prior to 1898 and has not since been reconstructed. It is now almost completely obliterated.

Has telegraph office, post-office, and rural guard cuartel.

Roads lead to El Abra, Malas Aguas, Viñales, and La Palma.

Best line of approach for land expedition is from the south. In case of operations along the northern coast Esperanza would be a very important base.

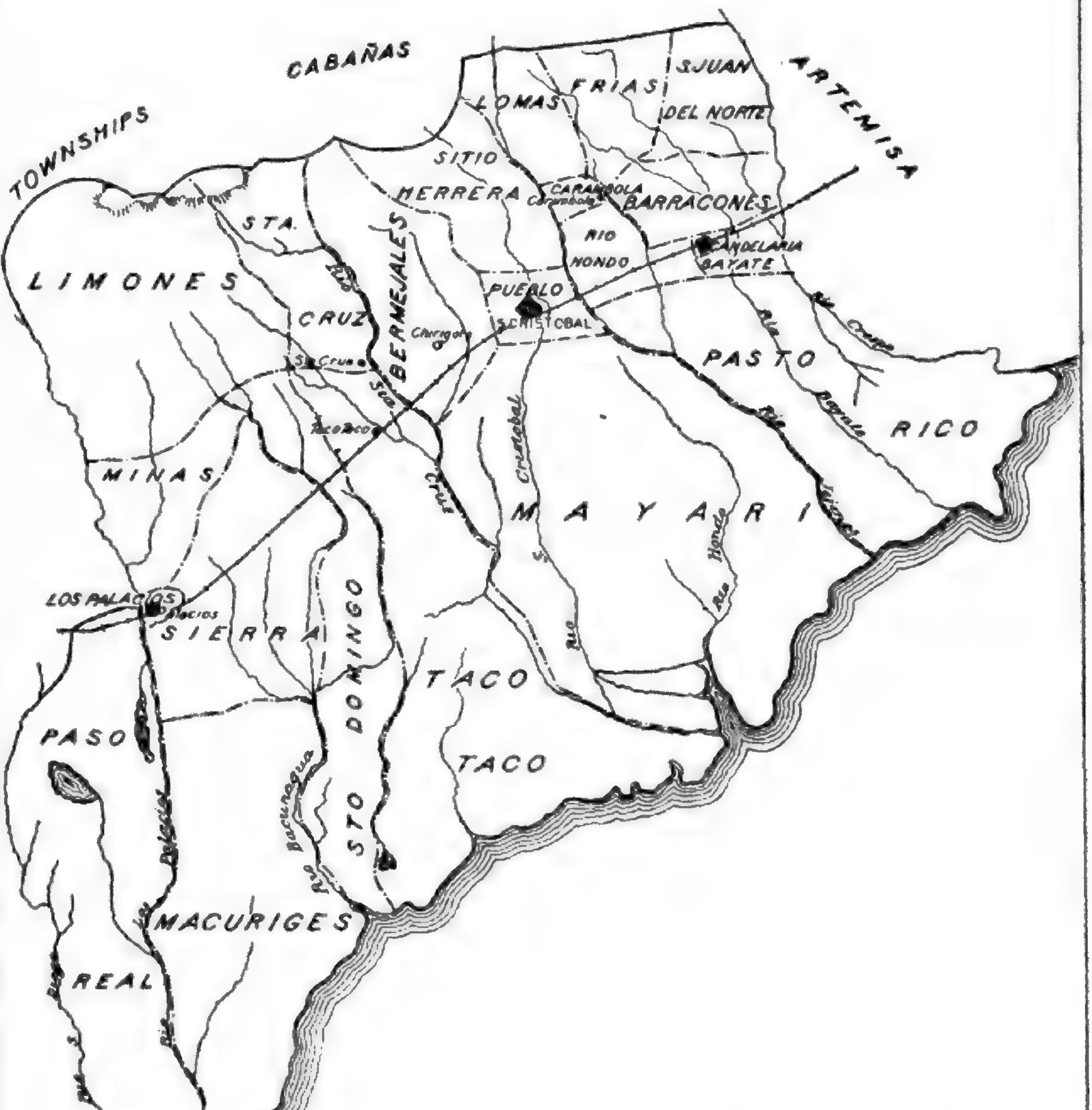
Las Playuelas.—Village. It is a small settlement about 13 miles by road north of Viñales, and consists of about 20 houses situated 300 yards from beach.

Ten of these houses could be used as storehouses. They are frame and have tile roofs. All private buildings. No railroad or tramway. No facilities for handling supplies. Good harbor for small craft. About 9 feet of water. No wharves and no frontage of any account. An old rotten pier, about 20 feet long, is used to accommodate small sailing craft freighting wood. Depth of water at pier about 6 feet. Not suitable to disembark troops or supplies.

San Vicente.—Barrio and sitio. The barrio is northwest of Viñales, and besides the sitio bearing its name it contains Baños de San Vicente, Abra, and Ancon. The sitio is 5.5 miles from Viñales on the road to Esperanza, at its junction with La Jagua-La Palma road, and consists of a store and one or two huts.

Baños de San Vicente.—Sitio. Near the Viñales-Esperanza road, 3 miles north of Viñales. Consists of a brick dwelling house, bath house, a small hotel, and a few surrounding farms. There are a number of sulphur springs.

Abra.—Sitio. Situated about 7½ miles northwest of Viñales, at the entrance to Ancon Valley and at the junction of roads and trails leading in and out of the valley. It is also known as Puerta de Ancon and Abra de Ancon. It consists of a store and a number of huts. Calzada northwest



SAN CRISTOBAL TOWNSHIP

to Playuelas; cart road northeast connecting with calzadas to La Esperanza and Viñales; and trails southeast and southwest into the valley. The sitio and pass could be commanded from a ridge to the west, as could also the roads and trails approaching them.

Ancon.—Sitio. Situated 5 miles northwest of Viñales on the Guasasa-Abra road and in the Ancon Valley. Consists of a general store and a few scattered houses.

Santa Fé.—Barrio and sitio. A rural district lying south of Viñales. About 3 miles south of Viñales and on the road to Pinar del Río is an abandoned store which bears the name Santa Fé.

Santo Tomás.—Barrio and sitio. A rural district lying southwest of Viñales. The barrio is about 6 miles in length and from one-half to one mile in width. The sitio consists of two stores and several scattered farm houses. Roads from this point lead to La Jagua, Peña Blanca, Gramales, and Viñales.

Yayal.—Barrio. A rural district lying northeast of Viñales. No point or village bearing the name in the district.

JUDICIAL DISTRICT OF SAN CRISTÓBAL.

Township:	Population.
San Cristóbal	20,388

TOWNSHIP OF SAN CRISTÓBAL (CAPITAL, SAN CRISTÓBAL.)

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
San Cristóbal	Pueblo (S. Cristóbal)	Rural and urban.		1,993
	Barracones	Rural	6.2	612
	Bayate	do	7	286
Chirigota	Bermejales	do	5	937
Candelaria	Candelaria	Rural and urban.	6.5	1,746
Carambola	Carambola	Rural	3.5	192
	Frías	do	6.2	247
	Limones	do	12	930
	Lomas	do	6	618
	Macuriges	do	22.5	533
	Mayarí	do	7.7	869
	Minas	do	12.5	812
Los Palacios	Palacios (Los)	Rural and urban.	16	3,058
	Paso Real	Rural	23.6	2,625
	Pasto Rico	do	11	180
	Río Hondo	do	3.1	992
Santa Cruz	Santa Cruz	do	5	900
	Santo Domingo	do	12.7	345
	San Juan del Norte	do	9.3	255
	Sierra	do	12.7	1,093
Taco Taco	Taco Taco	do	6	1,165

San Cristóbal.—Barrio and town. The urban portion of the barrio is the town of San Cristóbal; a small rural district surrounds it.

The town of San Cristóbal is situated on the main line of the Western Railway of Havana, and is the terminus of the San Cristóbal-Marianao calzada. It is about 17 miles northeast of Los Palacios, and 7 miles southwest of Candelaria. The San Cristóbal River flows just east of the town.

The country is rolling and slopes to the south. The houses are mostly one story high, constructed of brick and cement, with tile roofs; the remainder of the houses are one story high, constructed of wood, and have tile roofs. On the outskirts of the town there are a few native shacks.

The locality is probably healthful.

Population, 1,456.

Water is obtained from wells, of which there are a large number throughout the town; water of good quality and abundant. No system of distribution. The San Cristóbal River would furnish water for a large command.

Oil lights are used in the streets.

Barracks: Rural guard barracks situated on east side of the main street, first block from railroad station; it is constructed of brick and cement, tile roof, one story high; about 75 feet wide by 35 feet deep with an addition in rear 25 feet wide by 60 feet long; there is a court in rear, with stables for 30 horses; a well inside of court; good water and abundant quantity; repair and sanitary condition fair; no modern closets. Oil lights are used. All the buildings in that portion of the block facing the railroad station could be used as barracks for troops.

No public stables.

No transportation corral. Good location for corral on southeast side of road leading to the San Cristóbal River; water obtained from the river; dirt road leading to river.

Hospital: The second building south of Hotel Globo on the main street. It is used as a Spanish club; one story high, cement and brick; tile roof; about 50 feet wide by 80 feet deep; court in rear; well in court; water good and abundant; repair and sanitary condition good; lights, carbon gas; no modern closets.

Storehouse: Prison and police headquarters on side street just north of the Hotel Globo and west of the main street.

City hall on main street, opposite church.

Telegraph office in railroad station.

Post-office on calle Colón, one block from the railroad station, on west side of street.

Telephone office in same building with post-office; connects with Artemisa and Consolación del Sur.

No telephone central.

Camps: A brigade of troops could camp on the San Cristóbal River northeast of the town; water obtained from the river; fair quality and abundant; ground slopes gradually to the south; grazing fair; wood could be obtained in the foothills about 3 miles west.

The Western Railway of Havana runs through the town. There are two side tracks at the railroad station about 550 yards long. There is a platform and a pen for loading and unloading animals.

There is a water tank with dummy engine at the railroad bridge on the San Cristóbal River; used for supplying locomotives with water.

The railroad station is a one-story frame building with tile roof; about 30 feet wide by 65 feet long.

Roads leaving town: Calzada, northeast to Artemisa; dirt road southwest to Los Palacios; dirt road southeast to Los Pinos and Sabanalamar (south coast); trail northwest to Finca Brujo.

Best line of approach in case town were defended is from the west, as it affords better cover and ground is higher.

Barracones.—Barrio. A rural district lying northeast of San Cristóbal. Contains a number of small farms. No point bearing the name in the district.

Bayate.—Barrio. A rural district northeast of San Cristóbal and bordering on the barrio of Candelaria. Contains only small farms. No point or village bearing the name in the district.

Bermejales.—Barrio. A rural district lying west of San Cristóbal and bordering on the barrio of Santa Cruz. Includes part of finca Rosario and smaller farms. No point or village bearing the name in the district. Contains sitio of Chirigota.

Chirigota.—Sitio. Situated 4¼ miles southwest of San Cristóbal on road to San Diego de los Baños. Consists of 10 or 12 houses scattered along the road.

Candelaria.—Barrio and town. A district lying northeast of San Cristóbal. The barrio includes town of Candelaria and a small rural district surrounding it.

The town is on the Western Railway of Havana 57½ miles from Havana, and on the Marianao-San Cristóbal calzada, about 13½ miles southwest of Artemisa. Country on all sides low and level. Nearly all houses are built of stone and cement and have tile roofs; some frame houses. There are no industries within the town; people are mostly engaged in raising tobacco and pineapples.

Population, 1,746.

Water is supplied entirely from wells, of which there are a large number scattered over the town; water is of good quality. The largest well and the only one equipped with a dummy engine is in a large tobacco field south of the calzada and just west of town.

No sewer system. Oil lights are used.

Barracks: One-story stone building, tile roof, on the calzada in the third block from the west end of town; in fair state of repair and fair sanitary condition; sufficient size for quartering 100 men; no modern closets.

One-story stone building, tile roof, on the calzada, two blocks east of building just described; in good state of repair, and sanitary condition good; is now used as a club building; capacity, 25 men; no modern closets; well in court back of house.

A one-story building, tile roof, on calzada, in block east of club building; in good condition; capacity, about 50 men; well in court in rear; no modern closets.

A one-story stone building, tile roof, on the calzada, first block in east end of town; central portion of this building is used as a school, the eastern end as a dwelling, and the western end as a store; in fair sanitary condition and in good repair; capacity, about 100 men; water obtained from well in rear; no modern closets.

A one-story stone building, tile roof, in the second block from the east end of town and one block south of the calzada, is used as a club building; is in fair repair and fair sanitary condition; capacity, about 75 men; water obtained from well in rear; no modern closets.

Warehouse in northeast part of town; capacity, 200 men.

Guardhouse of rural guard on public square; capacity, 40 to 50 men.

No stables. No transportation corrals. A corral could be put on open ground west of town, just south of the calzada; water pumped from well by engine.

No hospitals; buildings described as barracks could be used as hospitals.

Storehouses: Pineapple-shipping house just south of railroad, near east side of town. There is a wagon road between building and railroad; loading platform 8 feet wide and about 3 feet high on north side of building; the building is frame, tile roof, about 75 feet long by 50 feet wide; main track runs next to warehouse, with siding on opposite side.

The railroad freight house is very small; is on opposite side of track from the ticket office.

The post-office is in the south part of the town, two blocks from the east end of town. The telegraph office is in the railroad office.

Two companies of infantry could camp or a battalion bivouac on the plaza. A regiment of troops could camp about 1½ miles northwest of finca San José, at the headwaters of the Río Santo Domingo; there is also a good well at that point; wood plentiful; water and grazing good. No other camp grounds.

The Western Railway of Havana has one siding 440 yards long at railroad station. Facilities for entraining and detraining, loading and unloading supplies consist of a small unloading platform at freight house.

A calzada leads east to Artemisa; calzada leads west to San Cristóbal; dirt road north, from the northeast end of town, to Finca Ginebra; dirt road south, from southeast corner of town, about 3 miles through fields and dwindles into a trail; dirt road south from railroad station to south coast (Sabanalamar).

Best line of approach to attack town is along the calzada, from either east or west.

Carambola.—Barrio and sitio. The barrio is a rural district northeast of San Cristóbal and bordering on barrios of Bayate and Barracones; contains only small farms. The sitio is 3½ miles by road northeast of San Cristóbal. Consists of 1 house.

Frías.—Barrio. A rural district lying northeast of San Cristóbal between the barrios of Lomas and San Juan; contains Baños Suroa and small farms. No point or village bearing the name in the district.

Limones.—Barrio. A rural district west of San Cristóbal. A potrero called Indio and small farms are included in the barrio. No point or village bearing the name in the district.

Lomas.—Barrio. A rural district lying southwest of San Cristóbal and bordering on the barrios of Santo Domingo and Paso Real. Potreros called Macuriges, Pinar de la Doña, Catalina, and San Juan de Zayas are in the barrio.

Macuriges.—Barrio. A rural district south of San Cristóbal, which includes the fincas of El Brujo, Los Pinos, and part of Rosario. No point or village bearing the name in district.

Mayarí.—Barrio. A rural district south of San Cristóbal, which includes the haciendas Sábanalamar, Angostura, Mayarí, Santa Ana, Santa Isabel, and San Cristóbal. The only point bearing the name in the district is the hacienda Mayarí.

Minas.—Barrio. A rural district southwest of San Cristóbal. No point or village bearing the name in the district.

Los Palacios.—Barrio and town. The barrio is a district lying southwest of San Cristóbal. It includes town of Los Palacios and a small rural district surrounding town. The town is situated on the main line of the Western Railway of Havana about 17 miles southwest of San Cristóbal and about 4 miles northeast of Paso Real. Connected with both towns by dirt roads.

The country on all sides is flat and open. The Los Palacios River touches the western edge of the town.

Houses are low, one-story structures, about half of which are built of cement and brick, the remainder consisting of frame houses and native huts. The brick and frame houses mostly have tile roofs.

The town is scattered over a considerable area. It is probably unhealthful on account of low country.

Population, 2,082.

No regular water system. Water is obtained from wells, of which there are a large number, and from the Los Palacios River, which skirts the edge of the town. The water from the wells is very good and abundant; that from the river is considered good. A large command (division) could be supplied with water from the river.

Oil lights are used.

Barracks: A one-story frame pineapple warehouse, tar-paper roof, on the northeast side of the town, two blocks from the railroad station. It is about 212 feet long by 50 feet wide; about 50 feet of the north end of the building is inclosed, the remainder is open. The inclosed portion of the building has a wood floor, remainder dirt floor. There is a well, 168 feet deep, just east of the building, and a dummy engine for pumping water into the wooden tank, which holds about 35,000 gallons. The tank is about 30 feet above the ground. Repair and sanitary condition of the building good. No modern closets.

A two-story frame building, tar-paper roof, situated just south of the pineapple warehouse; used as office and dwelling house. It is about 75 feet long by 50 feet wide. Repair and sanitary condition good. Water piped to house from well near the pineapple storehouse. One modern water-closet. Oil lights are used.

A one-story frame building, tar paper roof, just west of the pineapple storehouse, and at the north end of it. The entire building is about 60 feet by 60 feet, and it is divided into four compartments, each compartment being 60 feet long by 15 feet wide. Repair and sanitary condition good; water obtained from well. Oil lights. No modern closets.

A brick and cement one-story building, tile roof, one block north of the railroad station, and across the street from the office of the Los Palacios Land and Fruit Company. It is used as a rural guard barrack; 70 feet long by 40 feet wide;

court in rear, 70 feet long by 60 feet wide, with stables for 20 horses. Water pumped by hand into a small tank from well on sidewalk on north side of house. Well covered with stone, with iron manhole; water good and abundant. The barrack has a cement floor, and crushed rock and gravel in the court. Building new; sanitary condition excellent. No modern closets.

Stables: Stables in court of rural guard barrack; also a one-story frame building, tar-paper roof, 60 feet long by 25 feet wide, owned by the Los Palacios Land and Fruit Company; used as a stable; capacity, 15 horses.

No transportation corrals.

Plenty of vacant ground just north and east of the pineapple packing house, where a large corral could be put. Water could be obtained from the well at the packing house. Another corral could be located southwest of the town on the Los Palacios River; water obtained from river; grazing good.

Hospital: A brick and cement one-story building with tile roof; on main street; on west edge of town; used as a Spanish club. It is about 60 feet long by 50 feet wide, with court in rear. At end of court there is a cement and brick building one story high, tile roof, used as a stable; it is about 50 feet long by 30 feet wide. There is a well in court; water of good quality and abundant; repair and sanitary condition of building good; capacity, about 40 beds.

Storehouses: A one-story frame building, tar-paper roof, opposite the office of the Los Palacios Land and Fruit Company; used as a carpenter shop; it is 60 feet long by 30 feet wide.

Freight house just east of railroad station; it is about 80 feet long by 40 feet wide; galvanized iron sides and roof; plank floor, raised about 3½ feet above ground. Unloading platform next to railroad and running entire length of building; 3 feet wide. Platform on west end of building about 20 feet long and as wide as the building. Unloading platforms have cement walls, and are filled with crushed rock. Railroad siding runs alongside the building. The pineapple packing house described under head of barracks would be a better storehouse, but has no unloading platforms, tramways, or sidings.

No telegraph office except at the railroad station. Telephone in rural guard barrack which connects with Paso Real and San Diego de los Baños; not intended for public use. Telephone in building on main street, just west of the church. This is a public 'phone and connects with Paso Real only. Municipal office on side street leading from the railroad station, and half a block north of the main street. Post-office on the main street, just north of the railroad station.

Camps: Open ground north and east of the pineapple packing house sufficient for a regiment of infantry or cavalry; water obtained from well; country level; grazing good; wood hauled from the mountains about 4 miles north. Ample room along the Los Palacios River, either above or below the town, for camping about a brigade of troops; water obtained from the river; grazing good; wood obtained from the mountains about 4 miles north.

Good camp site on west bank of the Los Palacios River, at old Spanish blockhouse; wood and water convenient.

Defenses: Two old Spanish blockhouses near river; of little importance. One in eastern part of town near railroad; made of railroad iron. This blockhouse is about 25 feet square.

The Western Railway of Havana runs through the town; there are two sidings about 550 yards long. The only unloading platform is the one at the freight house. There is a platform and a pen for unloading and loading animals just east of the freight house; the platform is about 15 feet long by 8 feet wide by 3½ feet high. There is a small 36-inch-gauge railroad running from opposite the freight house about a mile and a half south to a brickyard. The railroad and brickyard belong to Compañía Providencia; it has no unloading platform and only one car drawn by oxen; road in poor condition.

Roads leaving town: A dirt road runs north to finca La Sierra and from there to San Diego de los Baños. A dirt road starts from the pineapple packing house and runs northeast to San Cristóbal via Santa Cruz, remaining north of the railroad the entire distance; dirt road running northeast on south side of the railroad to Taco Taco; dirt road, continuation of main street, to Paso Real; dirt road south to south coast through finca San Juan de Zayas.

Best line of approach to attack the town would be from the north, as the country in that direction is not so open.

Paso Real.—Barrio. A district lying southwest of San Cristóbal. Potrero called Dayaniguas and small farms included in district.

Pasto Rico.—Barrio. A rural district southeast of San Cristóbal and bordering on the barrios Río Hondo and Mayarí. Potreros called Barrendo, Buena Vista Porte, Aguacate, Nuestra Señora de Lourdes, and Jejenes are included in the district. No point or village bearing the name in the district.

Río Hondo.—Barrio. A rural district lying northeast of San Cristóbal. No point or village bearing the name in the district.

Santa Cruz.—Barrio and village. A rural district lying west of San Cristóbal and bordering on the barrios of Limones and Bermejales. Includes small village of Santa Cruz, part of finca Rosario, and smaller farms.

The village is on the Santa Cruz River, half a mile north of Taco Taco and about 5 miles west of San Cristóbal, and is connected with both places by dirt road. There are 3 stores and about 20 houses in the village; mostly native shacks and rather scattered. Population about 100. Water obtained from the Santa Cruz River; good quality and sufficient for a brigade of troops. No buildings available for quartering troops. Anywhere along the Santa Cruz River there is good ground for camping a brigade or more of troops; country slightly rolling; wood obtained near foothills, about 3 miles west. Grazing good; water good. Road out of village leads northeast to San Cristóbal; dirt road south to Taco Taco; dirt road southwest to Palacios.

Best lines of approach to attack village are from the east and north.

Santo Domingo.—Barrio. A rural district lying southwest of San Cristóbal. Potreros called San Bartolomé de Bacunagua and San Juan del Paso del Bacunagua are contained in it. No point or village bearing the name in the district.

San Juan del Norte.—Barrio. A rural district northeast of San Cristóbal and bordering on barrios of Frías and Barracones. The finca Asunción and smaller farms are included within its limits. No point or village bearing the name in the district.

Sierra.—Barrio. A rural district southwest of San Cristóbal. A field called Indio and small farms are in the barrio. No point or village bearing the name in the district.

Taco Taco.—Barrio and village. The barrio is a rural district lying southwest of San Cristóbal. It includes the village of Taco Taco, and the haciendas Puercos Gordos, Pinar de la Decioda, and San Bartolomé de Bacunagua y Guaiquiba on south coast.

The village is on the Western Railway of Havana. It is about 5½ miles southwest of San Cristóbal and 11½ miles northeast of Los Palacios, and is connected with both towns by dirt roads. The Taco Taco River flows just south of the village. The country is flat on all sides. The houses are low, one-story structures; mostly native huts. The village contains 5 stores and about 30 houses.

Population, about 300.

Water obtained from about 6 wells in the village, and from the Taco Taco River; fair quality; limited supply.

Oil lights are used.

Barracks: Frame building, one-story high, tile roof, 50 feet long by 30 feet wide; court in rear; well in court; repair and sanitary condition fair; no modern closets. No lights.

No stables.

No transportation corral. Corral could be put south of village; water obtained from the Taco Taco River.

No buildings available for hospital.

Storehouses: A two-story frame building, with grass roof, just south of the railroad station, about 80 feet long by 50 feet wide; no tramways, sidings, or unloading platforms.

Telegraph office at railroad station. No telephone. Post-office is on street running parallel to the railroad.

No good camp sites, owing to poor quality of water in river.

The Western Railway of Havana runs through the village. There are two sidings at the station, about 300 yards long.

The freight house is a one-story frame building, tile roof, about 50 feet long by 25 feet wide, with unloading platform 6 feet wide running the length of the building. There is a platform and a pen for loading and unloading animals.

Roads leaving village: Dirt road running north to San Cristóbal, via Santa Cruz; dirt road running southwest to Palacios; dirt road running southeast to finca La Angostura.

Best line of approach, in case village were defended, is from the north.

PROVINCE OF HAVANA.

TABLE OF DISTANCES, IN MILES, BETWEEN TOWNS IN PROVINCE OF HAVANA.

AGUACATE.																													
67	ALQUÍZAR.																												
8	54	BAINOA.																											
47	19	39	BEJUCAL.																										
44	26	43	19	BATABANÓ.																									
14	26	10	32	29	CATALINA.																								
40	35	29	22	41	30	GUANABACOA.																							
34	26	30	17	10	23	32	GUARA.																						
20	40	17	31	22	7	29	16	GÜINES.																					
58	6	30	19	19	46	33	22	38	GÜIRA DE MELENA.																				
45	32	32	19	39	35	3	32	32	30	HAVANA.																			
15	52	6	32	44	11	21	34	17	48	26	JARUCO.																		
7	53	15	38	10	9	38	29	13	50	47	16	MADRUGA.																	
38	29	33	10	23	33	16	16	32	29	16	24	34	MANAGUA.																
35	31	27	22	10	19	38	6	12	29	38	30	25	22	MELENA DEL SUR.															
54	26	22	14	35	53	11	30	42	34	8	36	53	19	38	MARIANAO.														
22	62	33	51	32	22	52	39	23	61	57	34	13	49	32	62	NUEVA PAZ.													
10	53	23	42	36	13	42	29	13	55	47	25	4	39	25	56	9	PIPIAN.												
44	16	41	10	10	33	32	10	26	13	29	35	39	15	14	25	49	39	QUIVICÁN.											
42	33	39	20	40	31	2	34	30	32	2	23	41	16	38	10	55	43	31	REGLA.										
61	13	46	10	26	54	26	26	37	10	21	47	55	21	31	16	65	50	16	23	S. ANTONIO DE LOS BAÑOS.									
15	55	4	37	43	14	26	37	21	54	29	5	19	28	33	37	32	27	40	31	52	S. ANTONIO DE RÍO BLANCO DEL NORTE.								
39	19	37	11	10	29	26	6	32	22	26	26	35	11	12	26	45	35	9	24	25	31	S. ANTONIO DE LAS VEGAS.							
42	18	39	9	10	31	32	8	34	15	27	33	37	13	32	24	47	37	2	29	18	38	7	S. FELIPE.						
29	39	23	19	23	14	16	16	13	35	21	13	24	13	16	24	36	30	22	19	29	18	13	20	S. JOSÉ DE LAS LAJAS.					
19	50	29	11	19	13	39	26	10	48	44	24	11	36	19	49	13	7	36	42	47	27	34	34	23	S. NICOLÁS.				
35	39	26	12	33	24	6	26	24	31	11	20	32	10	32	16	46	40	25	7	21	25	20	23	10	33	STA. MARÍA DEL ROSARIO.			
14	22	37	5	25	43	16	20	32	24	13	37	46	10	28	10	46	45	15	14	11	38	16	13	29	42	11	SANTIAGO DE LAS VEGAS.		
23	44	16	24	28	19	16	18	18	40	21	10	22	13	21	26	41	32	27	18	34	15	23	26	5	27	10	23	TAPASTE.	
45	32	32	19	39	35	3	32	32	30	00	26	47	16	38	8	57	47	29	2	21	29	26	27	21	44	11	13	21	HAVANA.

PROVINCE OF HAVANA.

LOCATION AND BOUNDARY.

The province of Havana is, with the exception of Pinar del Río, the most westerly of the provinces. All of its territory is in the most northern part of the island, its most southern boundary being a much higher zone than the northern boundary of Oriente.

The northern boundary is the Gulf of Mexico; the eastern, the province of Matanzas; the southern, the Gulf of Batabanó, and the western, the province of Pinar del Río.

AREA AND POPULATION.

The province of Havana, the smallest in area, is the most densely populated.

The area is 2,818 square miles; extreme length, about 60 miles; extreme width, about 40 miles.

The population is 538,010, divided as follows: Native white, 58.7 per cent; foreign white, 17.9 per cent; colored, 23.4 per cent; or white, 76.6 per cent; colored, 23.4 per cent.

JUDICIAL AND MUNICIPAL DISTRICTS.

The territory of the province is divided into eight judicial districts: Havana, Guanabacoa, Marianao, Jaruco, San Antonio de los Baños, Bejucal, Güines, and Isle of Pines. It is also divided into 18 municipal districts.

PROVINCIAL GOVERNMENT.

There is a governor and a provincial council of eight members elected by direct suffrage. Each municipal district has a mayor and a municipal council.

CAPITAL AND PRINCIPAL TOWNS.

The capital of the province is the city of Havana. Other towns worthy of mention are Guanabacoa, one of the most ancient towns of the island; Santa María del Rosario, Jaruco, San Antonio de los Baños, Bejucal, Güines, Santiago de las Vegas, Marianao, Managua, Güira, Batabanó, Nueva Paz, and Aguacate.

GEOGRAPHY AND TOPOGRAPHY.

The surface is made up of flat or rolling plains broken by occasional hills several hundred feet in height.

There are three great lakes in the southeastern part of the province, in the vicinity of the great swamp, called the Ciénaga de Zapata, viz, Laguna Caimito, Guanamón and Herrera. These are of considerable size.

Lake Ariguanabo is in the central chain of hills. It is 20 miles southwest of Havana. It has an area of about 6 square miles, and contains fish in large numbers.

There are a great many small coves and inlets on the northern coast of the province.

A few hills rise from the plains in the western part of the province. These are the extreme eastern outliers of the Organos Range of Pinar del Río. Other hills lie east and southeast of Havana, being closely connected with a large group northwest of Matanzas.

Commencing with the extreme northwestern part of the province, there are but few elevations.

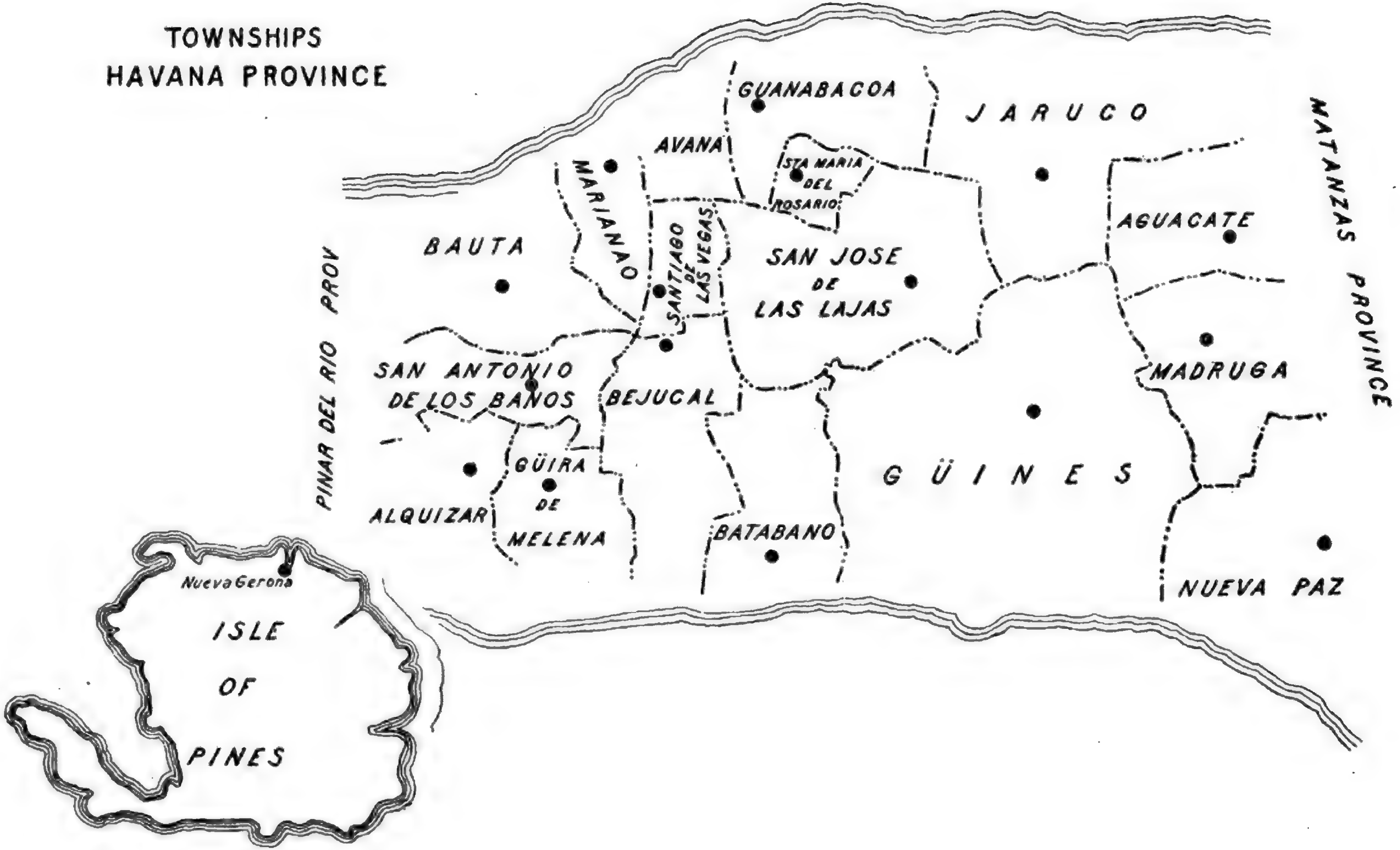
Within a radius of 6 miles of Havana city is the group of Havana, comprising the hills of Morro, Cabaña, and San Diego to the east of the harbor of Havana. Santo Domingo de Atarés is at the western arm of the bay and there is an elevation to the west of the city called Del Príncipe.

Near the city are the hills, Jesús del Monte and El Cerro. Going eastward we find the Sierra de San Martín, Sierra Guanabacoa, and Sierra Sibarimar; still farther northeast is the Sierra Susana, which rises just west of the small bay Escondido.

In the central part of the province are the Sierra San Francisco de Javier and Sierra San Francisco. In the western central part is the Sierra Bejucal.

There are many small hills scattered through the central region, and the elevations of the province gradually disappear as the southern coast is approached.

TOWNSHIPS
HAVANA PROVINCE



RIVERS.

The province is well watered by a number of small rivers and streams. None are of any value as a means of communication. The principal ones on the north are Santa Ana or Bauta, Baracoa, Marianao (Luisa or Quibu), Chorrera or Almendares, Cojímar, Bacuranao, Tarara, Guanabo.

On the south are the Guara Mayabeque or Güines, Rosario, etc.

COAST LINE.

The most important part of the coast line is that which lies around and about the Bay of Havana. This bay makes one of the finest harbors of the world. It is easy of access, spacious enough to contain 1,000 vessels, deep and well protected on all sides, except in the case of hurricanes.

There are many playas (plains or beaches) along both the northern and southern coasts of the province. The lowland in the southern part is intersected with innumerable small rivers, flowing south and emptying into the gulf or bay.

AGRICULTURE, INDUSTRY, AND COMMERCE.

The principal productions of the province are sugar cane, alcohol, tobacco, pineapples, yucca, starch, and fruits and vegetables of various kinds.

There are numerous cigar and cigarette factories, tanneries, manufactories of sweetmeats, rum, soap, beer, perfumery, carriages, etc.

Havana, the capital of the province and of the island, is the chief commercial city.

The principal exports to the United States consist of tobacco, fruit, wax and honey, sugar and molasses.

Imports include all the necessities and luxuries of life.

JUDICIAL DISTRICTS AND MUNICIPAL DISTRICTS.

Judicial district.	Township
Bejucal	Batabanó.
	Bejucal.
	Santiago de las Vegas.
Guanabacoa	Guanabacoa.
	Santa María del Rosario.

Judicial district.	Township.
Güines	Güines. Madruga. Nueva Paz.
Havana	Havana.
Jaruco	Aguacate. Jaruco. San José de las Lajas.
Marianao	Bauta (Hoyo Colorado). Marianao.
Isle of Pines	Isle of Pines.
San Antonio de los Baños	Alquízar. Güira de Melena. San Antonio de los Baños.

JUDICIAL DISTRICT OF BEJUCAL.

Township:	Population.
Batabanó	15,434
Bejucal	15,655
Santiago de las Vegas	13,058

TOWNSHIP OF BATABANÓ (CAPITAL BATABANÓ).

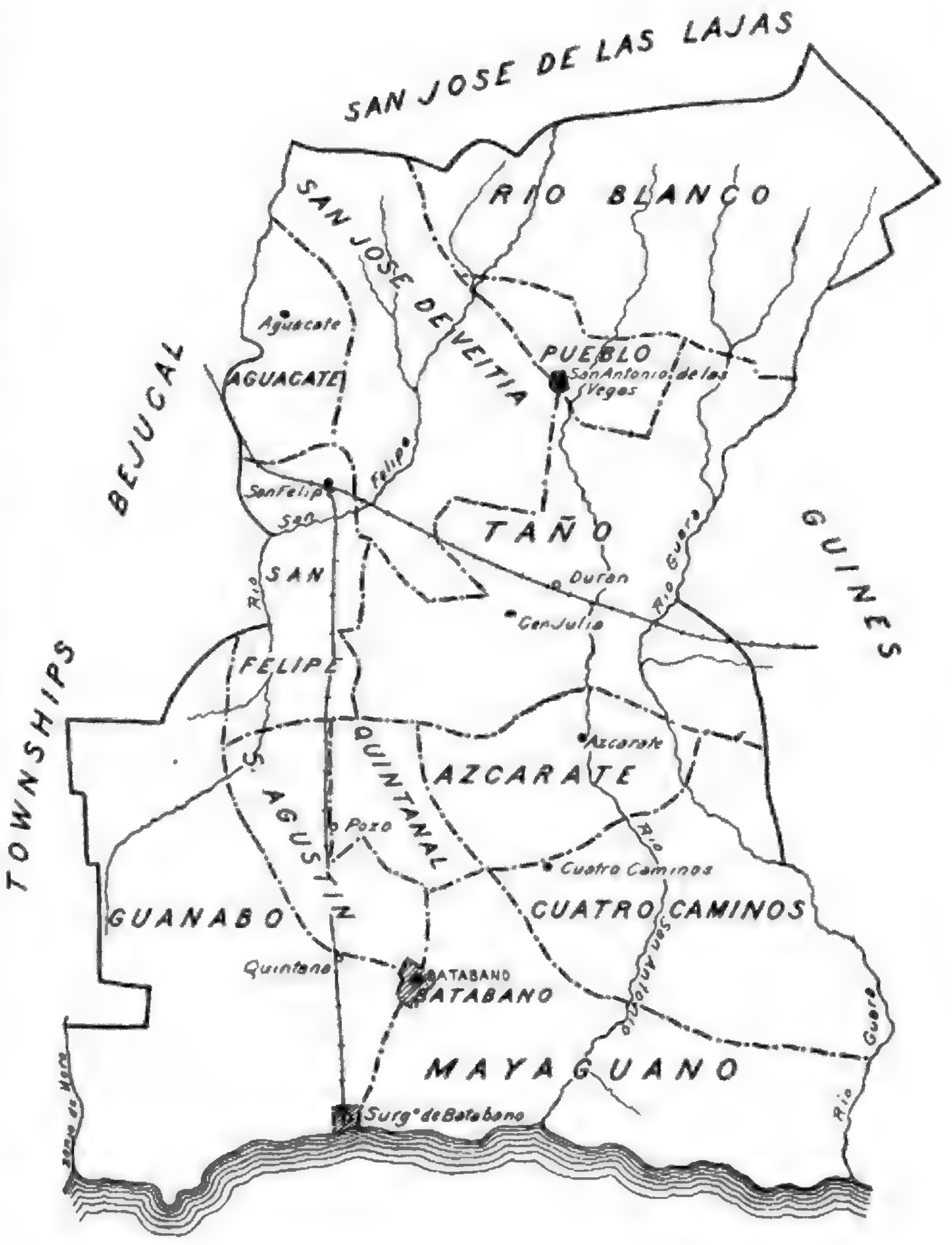
Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Batabanó	Batabanó	Urban		1,531
Aguacate	Aguacate	Rural	12.4	495
Azcárate	Azcárate	do	5	716
Cuatro Caminos	Cuatro Caminos	do	2.5	266
Quintana	Guanabo	do	3.1	1,145
	Mayaguanó	do	3.1	433
San Antonio de las Vegas	Pueblo (San Antonio de las Vegas).	Urban and rural.	12.4	991
Pozo Redondo	Quintanal	Rural	2.5	477
	Río Blanco	do	12	361
	San Agustín	do	2.3	647
San Felipe	San Felipe	do	9	1,616
	San José de Veitia	do	8.5	656
Surgidero de Batabanó	Este	Urban	2.6	2,352
	Oeste	do		2,559
	Pueblo Nuevo	do		79
Durán	Taño	Rural	6.7	1,110

Batabanó.—Barrio and town. A small town of 1,533 inhabitants about 2½ miles north of the port of Batabanó (Surgidero).

Practically all of the town can be seen from the corner of Máximo Gómez and General Pérez streets, the two main streets.

It has no houses that are particularly adapted for use as barracks, hospitals, or storehouses, although there are a num-

BATABANO TOWNSHIP



ber of small masonry and frame houses with tile roofs that could be used in case of necessity. They are all on the principal streets named above.

Water supply is from surface wells; water is not very good. A quarter of a mile south of the town is the pumping station and tanks of the waterworks of the port of Batabanó, and water could be easily piped to Batabanó if necessary.

There are no good camp sites near the town. The level cultivated ground north and northeast of the town is the best. This ground is extremely muddy in the wet season. There is no fuel in the vicinity.

Water would have to be obtained from the surface wells of the town or from the pumping station one-quarter mile south.

There are no stables in the town.

No defenses.

The best line of approach to attack the town is from the northeast across half-open cultivated country.

The following roads lead from the town: Calzada south to the port, a road north to Pozo Redondo and Quivicán, a road east to Melena del Sur-Guara road and also connecting with the calzada to Havana near Durán.

Aguacate.—Barrio and sitio. A rural district. The sitio bearing the name is about 4½ miles west of San Antonio de las Vegas and consists of a store and 2 houses.

Azcárate.—Barrio and sitio. A rural district lying northeast of Batabanó. The sitio is about 5 miles northwest of Batabanó and consists of 2 houses.

Cuatro Caminos.—Barrio and sitio. A rural district. The sitio is about 2½ miles by road northeast of Batabanó and consists of a store, a schoolhouse, and a few huts.

Guanabo.—Barrio. A rural district lying west of Batabanó. It contains the railroad siding Quintana, which lies about 1 mile west of Batabanó and consists of 2 stores.

Mayaguanó.—Barrio. A rural district. No village or point of this name.

San Antonio de las Vegas.—Barrio and town. A small town of about 350 inhabitants, situated 22 miles south of Havana on the Havana-Managua-San Antonio-Durán calzada, and 3½ miles north of the railway station of Durán.

It is a small, compact town, built along the calzada. The water supply is from a large well on top of the hill north of the town, near the calzada. Supply good and said to be abundant. Has a number of the usual small stores and residence buildings of frame and masonry.

Roads out of town: Calzada runs north to Havana, 22 miles, and south to Durán, 3½ miles. Unimproved dirt roads run east to Güines, northwest to Bejucal, and southwest to San Felipe. A narrow-gauge railroad runs south to the station of Durán; used only for hauling cane to the sugar mill La Julia.

Quintanal.—Barrio. A rural district lying north of Batabanó. Contains the village of Pozo Redondo.

Pozo Redondo.—Village. On the Batabanó branch of U. H. R. R., about 4⅝ miles south of San Felipe. Has post-office and telegraph office, 3 general stores, and about 25 houses. Population, about 150. Shelter for one company (65 men) in depot, post-office, and other houses. No shelter for animals. Water, which is good, comes from three or four wells. Two sidings, 300 and 200 yards long.

Río Blanco.—Barrio. A rural district. No point of this name within the district.

San Augustín.—Barrio. A rural district. No village or point of this name.

San Felipe.—Barrio and town. A town of 1,200 inhabitants, situated on the U. H. R. R. at a point where the Batabanó branch of the railroad leaves the main line. Buildings of the town are all small and none are particularly suited for military purposes. There are a number of side tracks at the station, amounting in all to about 2,000 yards. Houses at the depot and in the immediate vicinity sufficient for quartermaster and commissary storehouses. Water supply obtained from wells. Railroad depot is covered. Telegraph station at depot. The yard of the depot is surrounded by a high stone fence and contains well; steam pump, and water tank. A small two-story house near the church would make a hospital for 15 or 20 beds. Unimproved roads lead from the town: Northeast to San Antonio de las Vegas; west to Quivicán; south to Batabanó; northwest to Bejucal.

San José de Veitia.—Barrio. A rural district. No point of this name within the district.

Surgidero de Batabanó.—Town. Situated on south coast 35 miles south of Havana. It is built on low ground and there are numerous swamps. Divided into three urban barrios, viz, Este, Oeste, and Pueblo Nuevo. Population, 4,990.

Water supply: Water of an excellent quality is furnished the town from wells situated about 2 miles north of the beach. These wells are just east of the calzada near the town of Batabanó. The wells and water system are private property. A 3-inch pipe now supplies the town, but a new 6-inch pipe is being put in, and new machinery is being installed at the wells (1907). Springs giving excellent water abound on all sides of the town.

Barracks: There are no houses especially adapted for use as barracks. A one-story house on calle Maceo could be used for one company. Has city water. Calles Peralejo and Toledo are lined with small one-story residence houses, placed close together. All of the houses on each of these streets, with other houses in the immediate vicinity, would accommodate one full regiment. The whole town would afford shelter for two full brigades.

Stables: There are no private stables of any size in the town, even the hotels being without them. The public works department has a small stable with 10 stalls on the northern edge of town, to the east of calle Real. A large pasture surrounds it; sufficiently large for a corral for any sized command, but the ground is very wet in the rainy season. There is a large one-story tannery near these stables, to the west of calle Real, that would make an excellent stable and could be made to hold about 200 animals. The pasture land in the vicinity could be converted into a corral for a large number of animals. A stream of fresh water flows along both sides of calle Real and could be used for watering.

Hospitals: Any one of the 3 two-story hotels on or near the corner of calles Maceo and Main could be converted into a hospital, and would hold about 50 beds. There are several other two-story buildings that would serve as hospitals for small commands. Two of these are opposite each other on calle Maceo, numbers 16 and 20. Each has an estimated capacity of 30 beds.

Storehouses: There are 2 warehouses on the outer end of the railroad pier, each about 30 by 155 feet. Stores are loaded and unloaded directly from the cars, as there is a double track to the end of the pier. At the railroad depot itself there is a warehouse about 32 by 70 feet. In the immediate vicinity of the depot there are several stone buildings that could be converted into warehouses.

Post-office and telegraph office are on calle Maceo, No. 3. There is a good ice plant on the northern edge of town, one block east of calle Real.

Camp sites: A temporary camp of 3 or 4 regiments could be made on the land adjoining the beach west of the dock. This land is low and is sometimes flooded by the sea in time of storm. There is a large pasture on the northern edge of town that could be used for a camp of any size in the dry season. Water to be taken from any of the numerous springs that surround the town, or from the city water works. Permanent camps or camps in the rainy season would have to be made 3 or 4 miles inland in order to avoid the swamps.

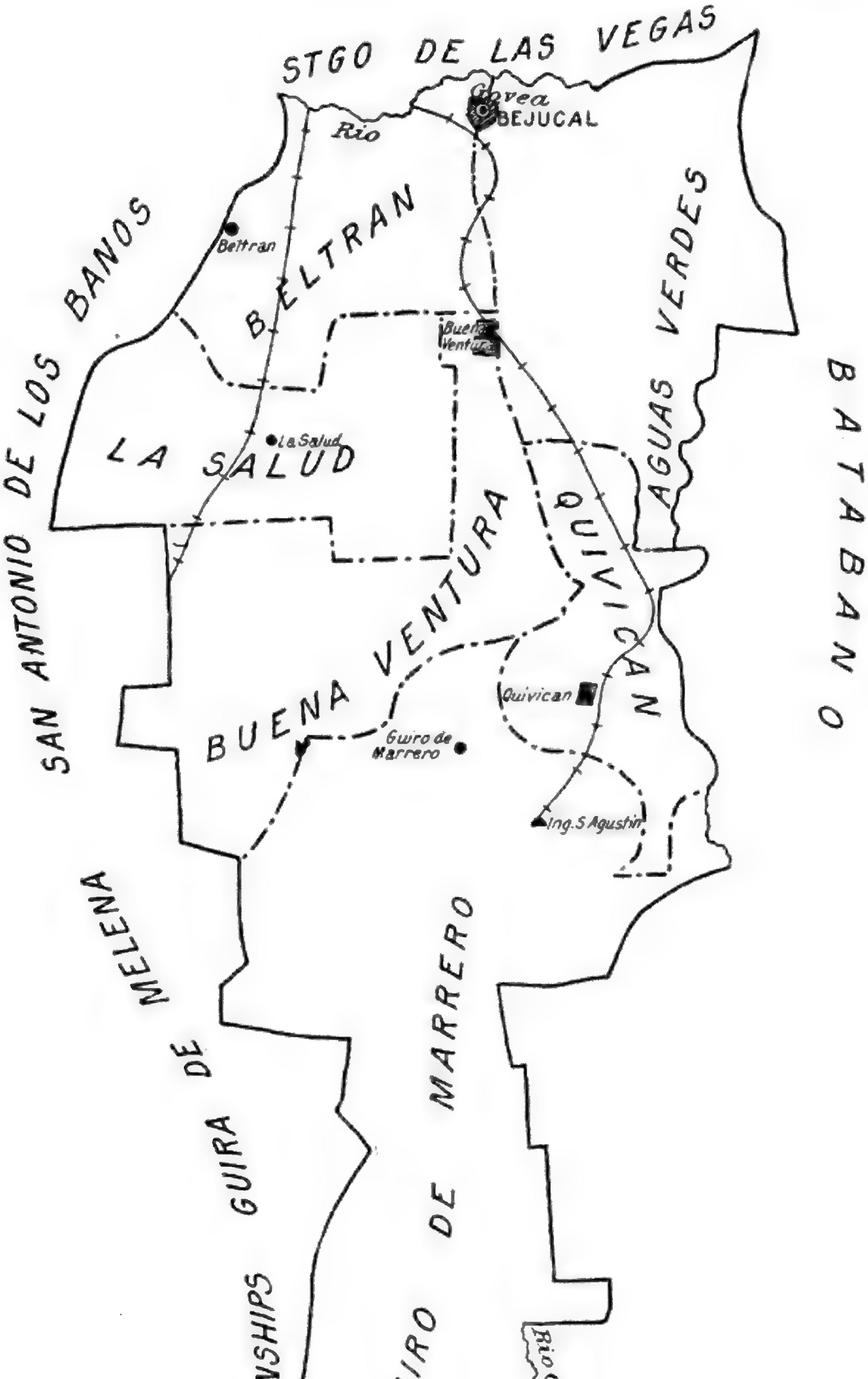
The railroad station is near the beach, 50 yards west of calle Real. A pier with a double track for freight cars extends into the sea from the end of calle Real. This pier is about 1,350 feet long, 680 feet of this being filled-in ground, and 670 feet built on piles. The water at the end of the pier is 9½ to 10 feet deep.

A calzada leads north to Havana.

Taño.—Barrio. A rural district. No point of this name in the district. In this district are the station of Durán and central La Julia.

Durán.—Station. A station and 2 stores on the U. H. R. R., situated 25½ miles south of Havana at the end of the Havana-Managua-San Antonio-Durán calzada. This is the station of the sugar mill La Julia, which is less than one-half mile south of Durán. Population, 40. The station has the following sidetracks: One, 400 yards long; one, 250 yards long; one, 200 yards long. A switch one-half mile long runs to the central La Julia, where there are also some short side tracks.

BEJUCAL TOWNSHIP



TOWNSHIP OF BEJUCAL (CAPITAL, BEJUCAL).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Bejucal	Primero	Urban		2,553
	Segundo	do		2,712
	Aguas Verdes	Rural	2.5	1,165
Beltrán	Beltrán	do	3.7	699
Buenaventura	Buenaventura	Urban and rural.	3.1	1,600
Güiro de Marrero	Güiro de Marrero	Rural	10.7	1,104
Quivicán	Quivicán	Urban and rural.	7.2	2,624
La Salud	La Salud	Rural	5.5	3,198

Bejucal.—Town. This town is situated south of Havana, 16⅞ miles by U. H. R. R. and 16¼ miles by the calzada. Divided into two urban barrios, viz, Primero and Segundo. Consists principally of limestone houses, most of them one story. Streets in general are improved and macadamized. Contains a church, a Spanish club, a Cuban club, schools, and a hospital.

Principal industry is the manufacture of cigars. The large trust factory employs about 600 hands.

Population, 5,265.

Drinking water is obtained from large wells north and south of town on calzada; farthest probably one-half mile from town. Most houses in town have wells, but water is not fit for drinking and is not very good for washing. Water is carried around town in carts and sold by the bucketful, and is very good. By capturing wells supply could be cut off.

Town has no sewer system; all houses have deep cesspools. Troops at present in Bejucal use dry earth closets; refuse from these is carted by contract, garbage by city (1907). Acetylene lights are used in front of stores and houses; supplied by owners. Park and ayuntamiento lighted by a small city acetylene machine. No gas or electricity.

Two buildings used as barracks by troops, at corner of Tenth and Eleventh streets, and Twelfth and Seventh streets; one-half company in each; both stone, one-story buildings, in good repair; sanitary conditions good. Cuban club, one story, well ventilated, suitable for one company; corner of Eleventh and Twelfth streets.

Spanish club, corner of Eighth and Ninth streets, for half a company.

Hospital, corner of Thirteenth and Eighteenth streets, for one company. The last three buildings are one-story stone structures, in good condition.

Tobacco factory, corner of Seventh and Fourteenth streets, is a two-story stone building and would hold half a company. All these buildings have wells, but in bad condition; water obtained from carts. Ayuntamiento, corner of Tenth and Thirteenth streets, suitable for one company. Church, 150 by 75 feet, stone, one story, high ceiling; one company. Three school buildings; Eleventh south of Eighteenth street, Seventh street south of Sixteenth street, and Eleventh and Eighth streets; all in good condition; platoon each.

One stable in town, extreme north end of Thirteenth street; 40 horses. Corral used by occupying force has covered stalls for 10 animals.

Town contains no regular transportation corrals. However, below is given location and size of inclosures in town which can be used for this purpose. All these are inclosed by stone walls varying from 6 to 10 feet, and the majority contain a small shed capable of sheltering from 2 to 4 horses:

	Feet.
Corner of Twenty-fourth and Seventh streets	100 by 100
Corner of Thirtieth and Ninth streets	150 by 200
Corner of Thirtieth and Ninth streets	300 by 200
South end of Eleventh street (4 stalls)	50 by 75
Corner of Fifteenth and Tenth streets (10 stalls)	186 by 110
North end of Eleventh street (30 stalls)	150 by 100

At present all these contain watering troughs—water brought around by wagons.

Open ground, 6 acres, west of town; wire fences; water.

Open ground, 12 acres, north of town; stone fences; water.

Hospital, corner of Eighteenth and Thirteenth streets; 30 beds; maintained partly by private means; no operating room; in charge of Sisters of Charity; excellent sanitary conditions.

Buildings mentioned above could also be used as hospitals.

Quartermaster and commissary storehouses: Any of the buildings mentioned above, especially the tobacco factory, might be used for this purpose, although one-quarter mile from railroad and no tramway.

Warehouse near depot (48 by 24 feet), of corrugated iron; has an unloading platform of cement (30 by 60 feet) with switches on two sides. Another unloading platform at this place, inclined, and about 30 feet long.

The railroad station at south end of Seventh street contains railroad telegraph office.

Post-office on Tenth street, between Seventh and Ninth streets, contains telegraph office of Comunicaciónes de la Isla de Cuba; telephone from railroad station to Trinidad asphalt mines not in use.

Many good camping places along calzada just north and just south of town. Room for a brigade north and south; good grazing; all situated on or near farms from which town water supply is obtained. Camp site, west of railroad station, for a regiment; good water. Wood is difficult to get; must be brought from town of Surgidero de Batabanó or be shipped up.

Remains of three blockhouses on hills just north of town; no walls remain; simply outlines and a small ditch.

Railroad is the Güines and Batabanó branch of the U. H. R. R. Sidings: One siding 1,116 feet long; one siding 783 feet long; one siding 532 feet long; one spur 498½ feet long; one siding (connecting) 108 feet long.

Calzada leads north and west to Rincón; out on Thirteenth street. Two roads, fair condition, unimproved, lead west to San Antonio de los Baños; one out on Eighteenth street, other from depot.

One road north on Ninth street to Santiago de las Vegas; branch of this road, just north of town, turns east to Trinidad. One road out on Twelfth street, east to Trinidad. One road out on Twenty-sixth street to fincas on hills. Calzada, south on Seventh street, to Quivicán and La Salud.

Hills on northern edge and one-half mile east of town control all roads north and east leading into town. These roads run through valleys and in places are sunken in the rock, so without possession of hills it would be impracticable to approach from this direction. These hills also command all ground to south and west. However, the country is low, half open, and contains many stone fences, which, with aid of thick underbrush in places, would make attack easier from either south or west.

Aguas Verdes.—Barrio. A rural district which contains no villages or store. Name of the barrio is taken from a farm.

Beltrán.—Barrio and sitio. A rural district. The place of this name has a store, a schoolhouse, and two huts, and is 4 miles by road west of Bejucal. No other stores in the district.

Buenaventura.—Barrio and village. A rural district. The place of this name is a village at the junction of the Bejucal-Salud and the Bejucal-Quivicán calzadas, 3¼ miles south of Bejucal. Consists of 2 stores and about 12 or 15 small houses.

Güiro de Marrero.—Barrio and village. A rural district. Place of this name has 2 stores and 6 or 8 small houses; 11 miles by road south of Bejucal. Within the district there are also two other small stores and the ingenio San Agustín.

Quivicán.—Barrio and town. About 24 miles south of Havana, at the end of the Havana-Bejucal-Quivicán calzada, and about 1 mile southwest of the station of Quivicán on the U. H. R. R.

A compact town of 1,270 inhabitants, situated in a flat country which is planted in cane and yucca. The town has a starch factory, and the sugar mill San Agustín is about 4 miles south of town.

The church and a number of the small buildings in the immediate vicinity of the plaza could be used as barracks in case of necessity, but there are no buildings especially adapted for this purpose.

Quartermaster and commissary storehouses should be located at the station of Quivicán, where there are 2 small buildings belonging to the railroad that could be used.

No stables of any size in town.

Corrals should be established on the northern or northwestern edge of town, as should also the camps for troops. Ground is level and sufficient for a camp of any size. Water supply is from wells; water is good and abundant.

No hospital. A two-story house on the plaza could be used as a hospital for 25 beds.

Post-office is on the plaza. Telegraph office is at the railway station about 1 mile northeast of town.

The switch which runs from the station of Quivicán to the ingenio San Agustín runs through the town and is used in bringing supplies. At the station of Quivicán there are side-tracks amounting to 1,575 yards.

Light is obtained from private acetylene plants and from oil lamps.

The best direction from which to attack the town would be from the west and north. This part of the country is not so open and use could be made of the macadam road from Bejucal.

The following roads lead out of town: A macadam road north, through Bejucal, to Havana; a macadam road northeast to the station; and unimproved roads southeast to Batabanó, south to San Agustín, west to Güira de Melena, and northwest to Salud.

Salud.—Barrio and town. Situated about 19½ miles south of Havana on the Western Railway. It is a small, compact town, with no large buildings. It has a small plaza with a small masonry church in the center.

Principal industries are the sorting and shipping of tobacco and the shipping of chickens and eggs.

Population, 1,465.

Has no buildings suitable for barracks. All that could be used for that purpose are grouped around the plaza or its vicinity.

For quartermaster or commissary storehouses there are several one-story buildings along the track of the station that could be used. One of these is of masonry.

The railroad has a galvanized-iron warehouse, 80 by 20 feet, with an unloading platform 110 feet long.

Corrals should be established on the open ground near the depot in order to utilize the railroad well and steam pump for water supply.

A large, well ventilated, one-story frame building, used as a club, would make the best hospital. This building is 75 yards east of the depot.

Water for the town is obtained from wells, which average about 100 feet in depth. One of these wells, near the plaza, is operated by a windmill. The station has a well and steam pump and there is another small steam pump in the town. Water is said to be of good quality and abundant.

The best camp ground would be in the open pastures southeast of the station. No fuel.

Post-office is on the plaza.

Railroad station is on the western edge of town.

The telegraph station is at the depot, and this place is also connected with Güira de Melena by telephone line.

The station has two side tracks—one 500 yards long, one 200 yards long—and a short spur 150 yards long. It also has a concrete ramp for loading animals.

Roads leading from town are: A calzada running east and north to Bejucal and Quivicán; a road running north from the plaza to San Antonio de los Baños and connecting with roads to Rincón and Bejucal; a road south from the eastern edge of town to Quivicán; one west and southwest to ingenio Fajardo, Gabriel, and Güira de Melena.

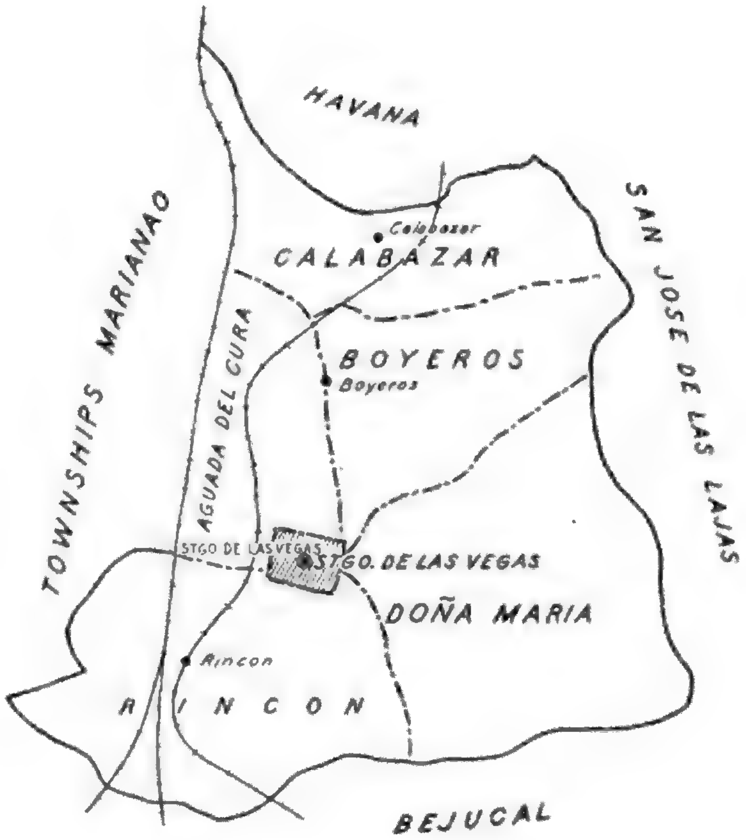
Not much choice as to point of attack, as the country is level and of the same nature on all sides. In the wet season artillery would have to approach the town from the northeast along the calzada.

TOWNSHIP OF SANTIAGO DE LAS VEGAS (CAPITAL, SANTIAGO DE LAS VEGAS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Santiago de las Vegas	Norte de la Ciudad	Urban		3,406
	Sur de la Ciudad	do		3,056
	Agua del Cura	Rural	1.2	203
Boyeros	Boyeros	do	2.6	3,085
Calabazar	Calabazar	do	4	1,711
	Doña María	do	2.3	575
Rincón	Rincón	do	2	1,022

Santiago de las Vegas.—Barrio and town. This town is situated on Western Railway of Havana, 11⅞ miles by rail, and between the eighteenth and nineteenth kilometer posts on the Batabanó calzada from Havana. It is divided into two barrios or wards, viz, Norte and Sur de la Ciudad. Town consists mostly of stone houses; some frame ones. The Government agricultural experiment station is situated here, also four large cigar factories; has Catholic and Prot-

SANTIAGO DE LAS VEGAS
TOWNSHIP



estant churches, a Spanish Club, hospital, and telegraph office.

Has neither gas nor electricity.

Population, 6,462.

Drinking water is obtained from large wells within the town; carted around and sold by the bucketful. There are some private wells, but most of them are very poor, so that a great portion of the water used is purchased.

Town has no sewer system. Houses have deep cesspools, which are cleaned by contract. Garbage carted away by the town. No lighting plant; oil and acetylene gas used by private individuals.

Barracks: At the point where Batabanó calzada leaves town there is a long row (200 yards or more) of low, frame houses, which might be used as barracks; in poor sanitary condition and are built right on the ground. Church might hold one company. Schoolhouses: One in front of church plaza, excellent sanitary condition, would hold almost one company; one, corner Fifteenth and Tenth streets, one company; one, corner Third and Fourth streets, half a company. On Fourth street between Ninth street and Seventh street is a large cigar factory (Manuel García); covers one-half a square; two stories. On corner of Eighth and Eleventh streets is the Spanish Club; clean and well furnished; one story; suitable for about one company. On corner Eighth and Thirteenth streets is a large two-story building in bad sanitary condition. Large three-story cigar factory on Second street between Fifth and Seventh streets.

The experimental station was at one time used as a post where Spanish troops, newly arrived, could be acclimated. It contains 30 acres. An excellent barracks (stone), with interior court—would hold over 1,000 men; also rooms for officers. Coupled with other wooden barracks this place could easily hold 2,000 men. There are also about 8 well built, frame houses for officers' quarters. Whole station is supplied with electric lights and has an excellent water system. Pump can furnish 10,000 gallons an hour; tank has a capacity of 75,000 gallons. This water is piped all over the station and also down to the city hospital. Station has good sewer system; refuse is piped out into the pasture and used as fertilizer. Plant supplied with two excellent alcohol engines. Has high water tower and also smokestack over 75 feet high, which might be useful in signaling. All surrounding country can be seen from this tower.

Few stables in town. Experimental station has about 50 or 75 stalls with water at hand and cement floors; ideal stalls; room in other buildings for 200 more horses.

Experimental station has 30 acres of pasturage, part of which is fenced off in corrals. About 2,000 horses could be accommodated.

Hospital is at the corner of Eighth and Eleventh streets, and contains small operating room with fair equipment; has room for about 40 beds. Water is supplied from experimental station. Has tub and shower baths, not in use at present. It is in poor sanitary condition, but could be made into an excellent hospital. Some of the buildings mentioned above and some detached buildings at experimental station might be used as hospitals; all at the station are in excellent sanitary condition.

Quartermaster or commissary storehouses: Buildings mentioned above, especially tobacco factories, suitable for this purpose; also building at experimental station. The station and the factories are all from one-eighth to one-quarter of a mile from railroad and have no tramways. At railroad station there is a small loading corral (40 by 20 feet) with loading platforms; also loading platform with freight house on it.

Railroad station, west end of Thirteenth street, contains railroad telegraph. Telegraph station, corner Eleventh and Twelfth streets, in post-office. No telephone system.

No ice machine.

Excellent 30-acre tract for camp at experimental station. Open country all along calzada south of town. Water obtainable by piping from station; south of town obtained from fincas. About 1 or 2 miles east of town is Pita Marquesa Valley; excellent grazing and good camping grounds. Wood in all cases must be bought in town or shipped in from coast.

No defenses.

Roads out of town: One north (west of experimental station) to Wajay; one at Thirteenth street leads to Managua by upper route; one south at Fifteenth street by lower route. Branch from this road, just out of town, leads to Bejucal and cuts off about 2 miles from calzada route. This and upper Managua road not passable by artillery. One road west on Thirteenth street leads to Wajay and Rincón; fair condition.

On the west side of town is a railroad embankment and about 1 mile or more to the west are hills which could be used to defend the town if artillery were used. These hills command the entrance to town from Pita Marquesa Valley. It was in this valley that the rebels concentrated before moving on Wajay in the revolution of 1906.

Outside of the railroad embankment mentioned above there are no elevations within rifle shot of the town.

Aguada del Cura.—Barrio. A rural district. No village of this name.

Boyeros.—Barrio and village. Twenty-five small houses built along the Havana-Bejucal calzada, about 9 miles from Havana. Has a small stone station on the Western Railway, but no side tracks. A calzada branches northwest from this place to Mazorra and Wajay. Known as Rancho Boyeros. Population about 108.

Calabazar.—Barrio and town. Situated on the Havana-Bejucal calzada about 7½ miles from Havana. Western Railway passes through town.

Population, 1,400.

Has a water system; steam pump, tank and pipes. Water obtained from a spring on the Almendares River, which skirts the northern edge of town.

A large new building in the center of the town, 3 stories high, built for a cigar factory but at present unoccupied; would hold 1 battalion, and a two-story building adjoining it and extending to the plaza would accommodate 200 more men.

The best site for camps and corrals would be along the Almendares River north of the town.

Railroad and telegraph station on the eastern edge of town. Post-office facing the plaza.

One railroad siding 500 yards long. Small frame passenger station. Four small masonry houses in the immediate vicinity could be used as commissary and quartermaster storehouses.

Best line of approach for attack would be from south; rolling, bushy land. Town protected on the north by the Almendares River.

Doña María.—Barrio. A rural district. No place of this name in the district.

Rincón.—Barrio and village. A small village of about 318 inhabitants, situated 13.6 miles south of Havana on the Havana-Bejucal calzada, at the point where the Havana-San Antonio de los Baños calzada branches west from the above calzada toward San Antonio.

This village is also at the junction of the Guanajay branch of the U. H. R. R. with the main line, and the Western Railway of Havana crosses the U. H. R. R. at this point.

Water supply obtained from wells within the village.

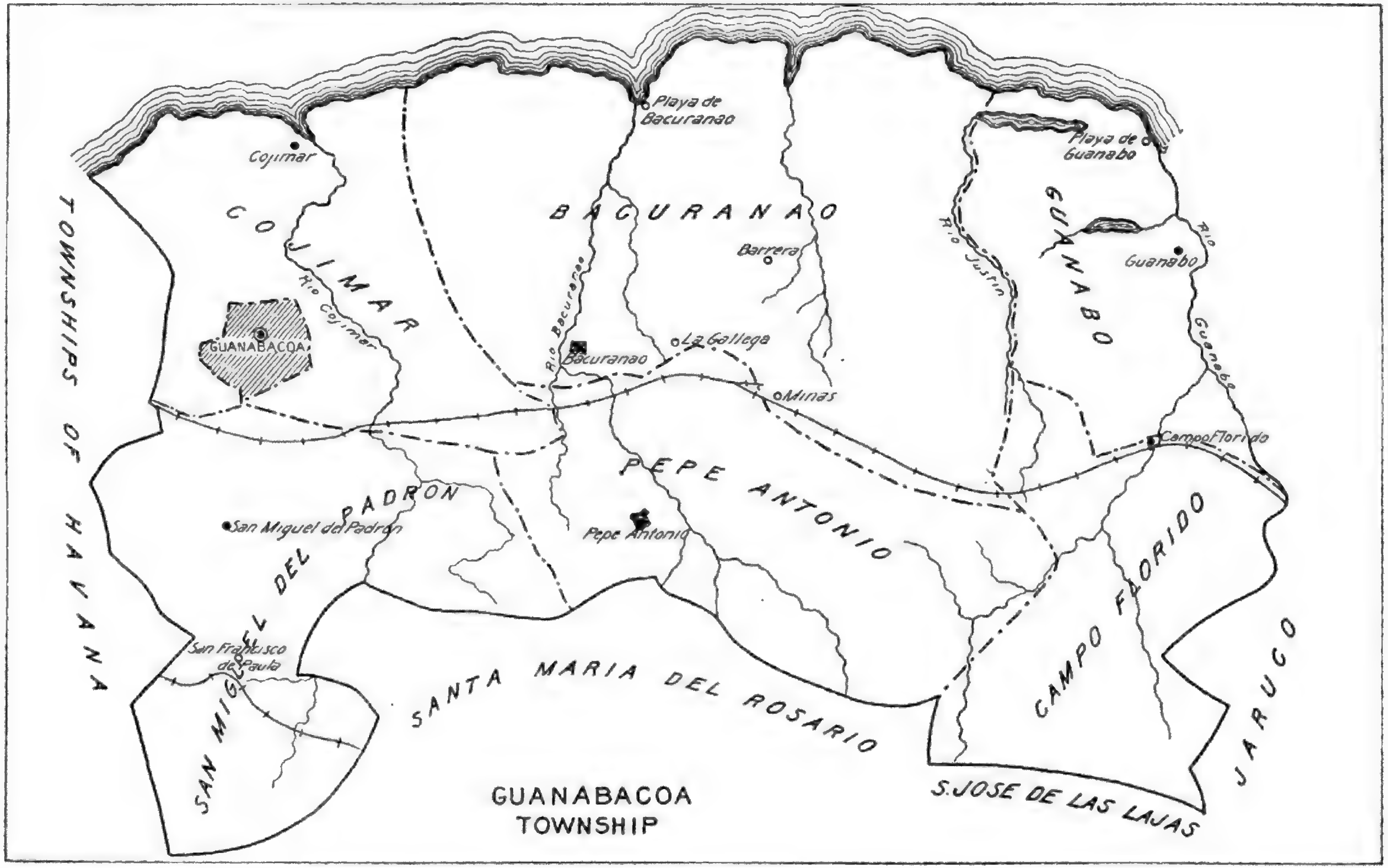
There is a two-story masonry house near the station that could be used as a storehouse. There is also a frame house near the station that could be used for the same purpose in case of necessity.

The U. H. R. R. or United Railroads of Havana, has the following side tracks: Double track leads into Rincón from the north and continues for 440 yards south of the station. There is one switch 300 yards long. A spur 150 yards long south of the station. North of the station there is a switch 310 yards long, connecting U. H. R. R. with the Western Railroad; also a switch 100 yards long and a 15-foot ramp for loading animals. The track at the station is covered and has a narrow platform 150 feet long.

The Western Railway has the following side tracks: A spur, with a turntable, 150 yards long; a spur, 156 yards long; one switch, 175 yards long, and one switch, 430 yards long. The station platform is 200 feet long. There is also a corral about 25 by 25 feet with a 15-foot ramp for unloading animals.

JUDICIAL DISTRICT OF GUANABACOA.

Township.	Population.
Guanabacoa	24,968
Santa María del Rosario	3,915



GUANABACOA TOWNSHIP

TOWNSHIP OF GUANABACOA (CAPITAL, GUANABACOA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital. *Miles.*	Population.
Guanabacoa	Este de la Asunción	Urban		1,711
	Oeste de la Asunción	do		2,911
	Este de San Francisco	do		2,191
	Oeste de San Francisco	do		1,203
	Cruz Verde	do		2,469
	Este de Corral Falso	do		1,867
	Oeste de Corral Falso	do		2,016
Bacuranao	Bacuranao	Urban and rural.	4	2,577
Barrera.				
La Gallega.				
Playa de Bacuranao.				
Minas.				
Campo Florido	Campo Florido	Rural	12.2	930
Cojímar	Cojímar	do	3	2,162
Guanabo	Guanabo	do	13.7	1,345
Playa de Guanabo.				
Pepe Antonio	Pepe Antonio	Urban and rural.	5	1,328
San Miguel del Padrón	San Miguel del Padrón	Rural	2.2	2.258
San Francisco de Paula.				

Guanabacoa.—Barrio and town. Consists of the barrios Asunción Este, Asunción Oeste, San Francisco Este, San Francisco Oeste, Corral Falso Este, Corral Falso Oeste, and Cruz Verde. These barrios are wards of the city.

It is the second town of importance in the province of Havana; situated on the high ground about 2 miles east of Havana Harbor and overlooking the city and the bay. A compact town, with a population of 14,368; a great many residents have their places of business in Havana. Guanabacoa has no industries of much importance. It is practically a suburb of Havana and it is made up of residences and stores. The place would not be of very much military importance except in case of a siege of Havana, as it lies well within the lines of resistance that would have to be established to protect the city.

The water supply is obtained from the city waterworks of Havana, water being pumped from Palatino Waterworks to a double, concrete-covered tank on the top of the hill La Cruz, which is at the western edge of Guanabacoa on the side toward Havana. This tank can be seen from many places in and around Havana, and, as it is square, it appears from a distance to be a defensive military work. The water supply of the town could be cut off by destroying the tank or disabling the Palatino pumping station.

The town has no sewer system. It is lighted by electricity, the plant being at No. 12 Luz street, near the railroad depot.

There are a great many buildings in all parts of the town suitable for use as barracks and hospitals. The building now used by the rural guard is at 58 Máximo Gómez street; suitable for one company. The three-story building at the east end of Máximo Gómez street, used as a college, would make an excellent general hospital. The city hospital is situated at the eastern end of E. Guiral street, and has a capacity of 50 beds. This is a masonry building, in good state of repair and equipped with modern conveniences.

There are a number of masonry buildings in the immediate vicinity of the railroad depot that could be used as quartermaster and commissary storehouses.

The post-office and telegraph office combined are at No. 17 Macéo street. No telephone system. Railroad depot is on the southeastern edge of town on Luz street. Station has a large covered passenger depot. The total length of side tracks is about 1,000 yards.

A convenient site for a small camp of about one regiment is on the western edge of town near the water tank. Corrals could also be put at this place. Ground is hilly on all sides of the town.

The following roads lead out of Guanabacoa: A macadam road west to Regla, connecting with the ferry to Havana; a macadam road southwest to Luyanó and connecting from there with Havana and Güines; a macadam road north to Cojímar; a macadam road east to Campo Florido. The part of this last road between La Gallega and Minas is unfinished, but work is being done (1907). Unimproved roads to Playa de Bacuranao and San Miguel del Padrón.

The town is also connected with Havana by the U. H. R. R. and by the electric street-railway system. Both of these railroads run to Regla and the bay is crossed by ferry. An attack on the town should be made from the east.

Bacuranao.—Barrio and village. The barrio is a rural district containing about 160 farms and the villages of Bacuranao, Barrera, La Gallega, Playa de Bacuranao, and Minas. The village of Bacuranao is built along the Guanabacoa-

Campo Florido calzada and contains about 60 houses and 2 stores.

La Gallega.—Sitio. A small place on the Guanabacoa-Campo Florido road. It contains about 12 houses.

Barrera.—Village. A small unimportant village in the center of a small uncultivated valley. Population, about 100. Has 20 or 25 houses, 2 small stores, and a ruined church. Water is taken from surface wells and is not good. Church still has a fairly good tile roof and could be used for shelter, or as a storehouse in case of emergency. Open, grassy ground in center of town sufficient for camp of one regiment.

La Playa de Bacuranao.—Village. A small fishing village on the coast. Has a store and about 15 small houses. The bay at this point is small and unprotected; has a sandy beach.

Minas.—Village. Small, compact village of little importance. Has about 25 small houses; one brick, one stone, and the rest of wood. About half the houses have tile roofs; the rest are thatched. Railroad station is about half a mile south of the village. Two small buildings in its vicinity that could be used as storehouses for a small command. A dirt road running south connects the village with the station. Water supply obtained from some deep wells in the village. There is also a good-sized creek of clear water running along the western edge. Good camp grounds are to the west of the village; good grazing land; water from the stream mentioned above. By using all the houses, Minas would afford shelter for two battalions.

Campo Florido.—Barrio and village. The village is built almost entirely along the calle Real or main street. This street runs from the center of the depot 300 yards northwest, where it reaches the turnpike. Beyond the turnpike there are a few huts, but most of the village lies between the turnpike and the depot. Population, 350. The water supply of the village is obtained from the river Guanao. There is also a deep well on the western edge of the village. At the corner of the turnpike and calle Real there is a large two-story building that is used as a general store. Would be very suitable for a hospital. Capacity of the second floor about 50 beds. The rest of the houses are one story and small. Most of them are used as stores in the front portion and as living rooms in the back. The whole village would probably afford temporary shelter for two regiments or one regiment at war strength.

Railroad station of the U. H. R. R. is at the south end of calle Real; is a stone building, about 36 by 90 feet; one story.

The best place for a camp in the immediate vicinity of the village is to the south of the depot, on pasture land. Water to be obtained from the river Guanao, which runs southeast of the village. There is a small plaza in front of the station on which two battalions could bivouac.

Cojímar.—Barrio and village. A summer resort about 3 miles east of Havana on the coast. Situated on a small bay, and has several bath houses. The Hotel Campoamor, a large, new, four-story building, is on the hill back of Cojímar; would make an excellent general hospital. Population, about 241.

Guanabo.—Barrio and village. Village of this name is situated near the coast range, north of Campo Florido. Contains 2 stores and 20 to 30 small houses. Population, about 200. The district of Guanabo contains 80 farms. It also contains the village of Playa de Guanabo.

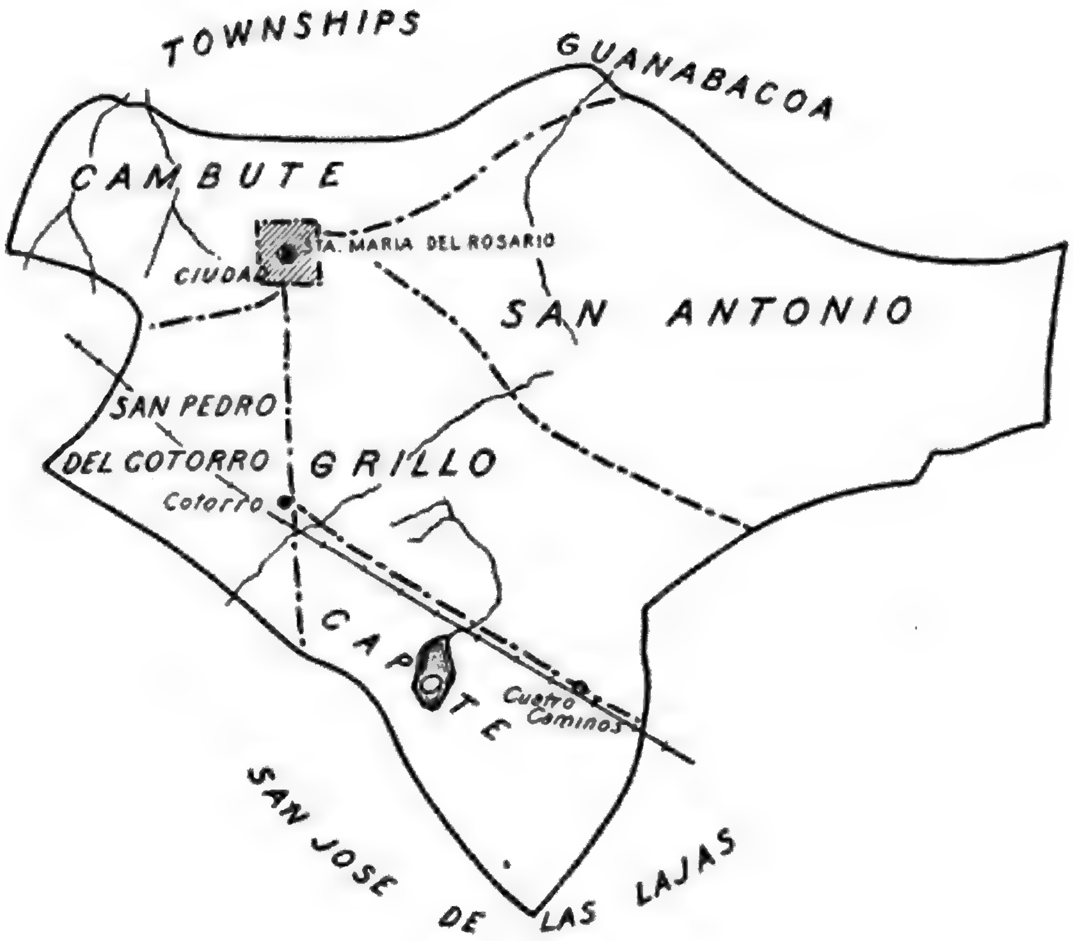
Playa de Guanabo.—Village. A small, unimportant village near the coast range of mountains, north of Campo Florido. It has 2 stores and 20 to 30 small houses, inhabited by fishermen and charcoal burners. Population, about 65.

Pepe Antonio.—Barrio and village. The place bearing the name was formerly known as Peñalver. The village is situated on the top of a high hill. It is a very old place and falling into decay. Has an old church and about 30 houses. Many of the houses are built of stone and are along the one main street. The water supply is obtained from wells and from a small stream east of the village. Unimproved roads connect this place with Guanabacoa, Bucuranao, Minas, Campo Florido and Santa María del Rosario. No telegraphic or telephonic communication.

San Miguel del Padrón.—Barrio and village. A rural district. Place of this name is a small village with a store and 8 or 10 houses. Population, about 75. Village of San Francisco de Paula is in the barrio.

San Francisco de Paula.—Village. A small village of 30 or 40 houses built along the Havana-Güines calzada, 6.2

SANTA MARIA DEL ROSARIO TOWNSHIP



miles from Havana. Population, about 550. It is at the top of the ridge that rises from the bay at Luyanó and culminates in the high hills around San Francisco. These hills command the whole of the city of Havana and would have to be held in case the city were to be defended. The only military importance this place would have is its nearness to the natural line of outer defences of Havana. It was within the Spanish line established in 1898. The whole village would probably shelter one and one-half regiments. Water is obtained from wells; said to be good and abundant.

TOWNSHIP OF SANTA MARÍA DEL ROSARIO (CAPITAL, SANTA MARÍA DEL ROSARIO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Santa María del Rosario	Ciudad	Urban		701
	Cambute	Rural	0.5	319
Cuatro Caminos	Capote	do	3.7	679
	Grillo	do	2.5	442
	San Antonio	do	3.7	430
Cotorro	San Pedro del Cotorro	do	2	1,344

Santa María del Rosario.—Barrio and town. A small compact town of about 650 inhabitants. It contains, all told, 150 houses, counting native huts. Situated about 1½ miles north of Cotorro, with which it is connected by a macadam road. This town has a small group of mineral baths, and a small but well-kept public bath house. It is a summering place for many people from Havana. The best buildings of the town are grouped around the plaza, where there are a number of small one-story masonry buildings that could be converted into barracks and storehouses if necessary. Water supply is from wells and from a spring of good drinking water at the bath house. There is a good-sized masonry church in the plaza. Post-office faces the plaza. Ground on all sides of the town is hilly, and there is not much choice of camping ground; probably the best ground for a small camp is in the vicinity of the bath house, so as to use the water supply from the spring. The station for the town is on the Havana Central Electric road at Cotorro. Carriages and guaguas run between Cotorro and Santa María during the summer months. Besides the macadam road leading to Cotorro, there are unimproved roads running to Guanabacoa, Minas, Campo Florido, and Tapaste. The last three mentioned roads are very rough and very difficult for wheels.

Cambute.—Barrio. A rural district. No village or point of this name. Whole district contains about 50 houses.

Capote.—Barrio. A rural district. No place of this name in the district, but it contains the village of Cuatro Caminos.

Cuatro Caminos.—Village. This place is on the Havana-Güines calzada, 13 miles from Havana and 5½ miles by road southeast of Santa María del Rosario and is the same style and class of village as Cotorro described below. Population about 192.

A macadam road branches southwest to Managua. An unimproved dirt road runs north to Tapaste. The Havana Central Electric Railroad runs through the village.

Grillo.—Barrio. A rural district. No place of this name in the district.

San Antonio.—Barrio. A rural district. No village or point of this name. The whole district contains about 58 houses.

San Pedro del Cotorro.—Barrio and town. Cotorro is a small town scattered along the Havana-Güines caldaza, 9 miles from Havana. Has a number of small masonry houses and stores that could be converted into barracks and storehouses if necessary. The Havana Central Electric road passes through the town, and there is one of the standard electric transforming stations of the company. Population, 1,178.

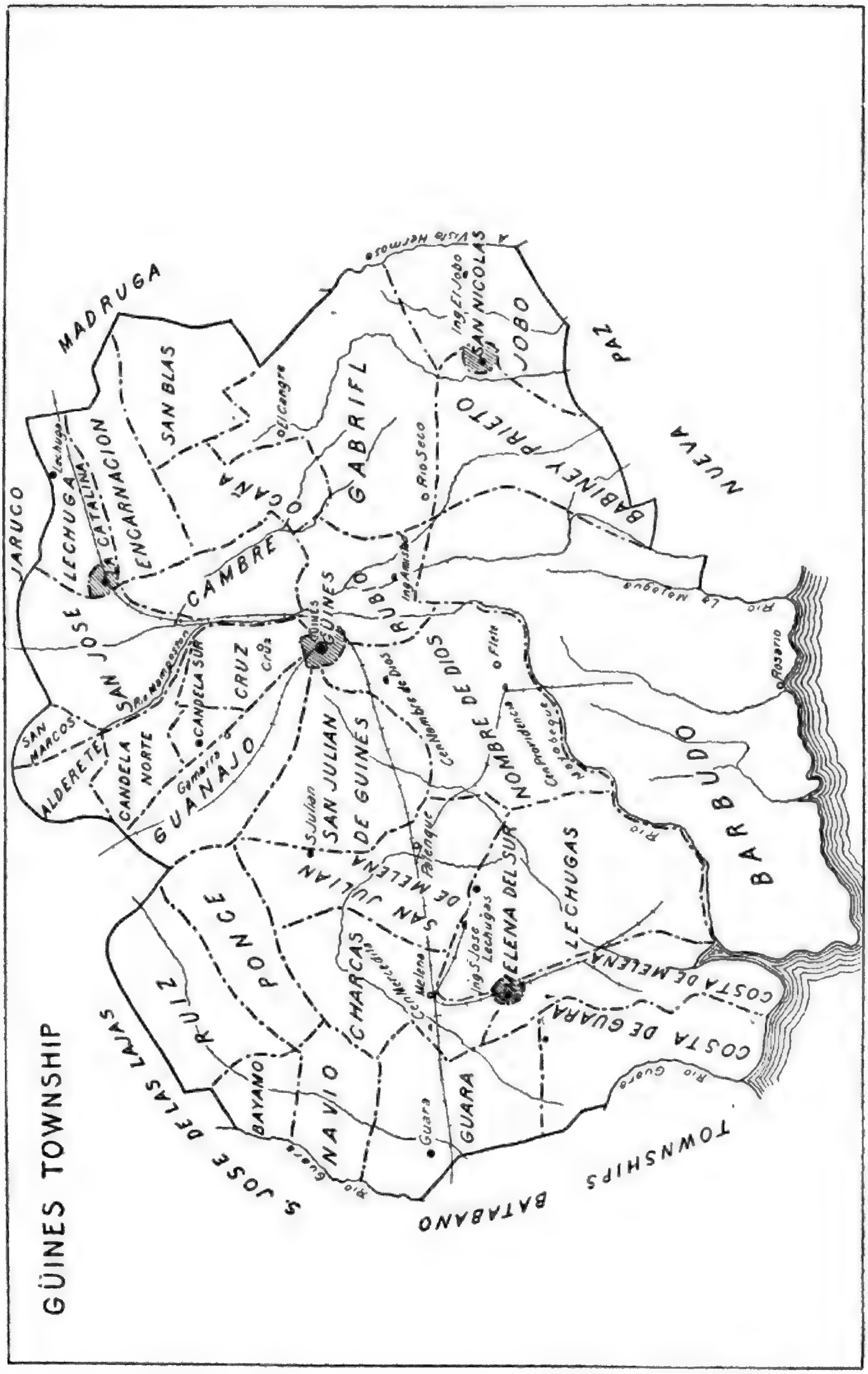
Water supply obtained from wells; water said to be good and abundant.

In addition to the Havana-Güines road, a macadam road runs north to Santa María, and an unimproved road runs to Managua.

JUDICIAL DISTRICT OF GÜINES.

Township:	Population.
Güines	32, 216
Madruga	7, 111
Nueva Paz	12, 196

GÜINES TOWNSHIP



TOWNSHIP OF GÜINES (CAPITAL, GÜINES).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Güines	Primero de Güines	Urban		3,161
	Segundo de Güines	do		2,956
	Tercero de Güines	do		1,936
Zaragoza	Alderete	Rural	6.5	199
	Babiney Prieto	do	7.2	812
	Bayamo	do	11	306
Rosario	Barbudo	do	7.6	1,150
El Pico	Cambre	do	3.2	646
La Conocida	Candela Norte	do	5.1	467
Candela	Candela Sur	do	4.2	182
Gamarra.				
Mateo Reyes.				
La Catalina	Norte de Catalina	Urban	7.5	592
	Sur de Catalina	do		794
Melena	Charcas	Rural	8	1,142
	Costa de Guara	do	12.5	170
	Costa de Melena	do	10.6	718
Cruz	Cruz	do	1.7	762
Ocejo.				
	Encarnación	do	6.2	419
Río Seco	Gabriel	do	6.2	1,080
Guanajo	Guanajo	do	3	353
Guara	Guara	do	12.2	1,405
	Jobo	do	9.3	712
Lechuga (1)	Lechuga	do	8.2	369
Lechuga (2)	Lechugas	do	7.7	1,140
Melena del Sur	Melena del Sur	Urban	9.8	1,615
Navío	Navío	Rural	12	335
Flete	Nombre de Dios	do	3.6	1,728
	Ocaña	do	4.3	424
Flor de Mayo	Ponce	do	6	224
La Libertad	Rubio	do	1.5	1,266
La Paloma.				
	Ruiz	do	9.3	243
El Cangre	San Blas	do	5.6	165
Ojo de Agua	San José	do	5.3	1,006
	San Julián de Güines	do	1.3	865
San Julián	San Julián de Melena	do	5.5	538
Palenque				
	San Marcos	do	7	10
San Nicolás	San Nicolás	Urban	10.3	2,326

Güines.—Barrio and town. Güines is a town of importance. It is well regulated, and in the center of the sugar industry of the province of Havana. Large springs are situated some 9 miles from the town. About one-half mile from the town the river has been tapped and the whole surrounding country irrigated, making the locality suitable for truck gardening. There are some half dozen establishments for packing and shipping tomatoes, cabbage, new potatoes, eggplants, lettuce, etc., to Havana and the United States. Population, 8,053. The town is mostly inhabited by negroes who have no fixed occupations. Some dozen American families live in the town.

The water supply is obtained from an irrigation ditch connected with the Río Mayabeque, which has its source in the aforementioned springs. There are two other ditches besides this one, and there being no sewer system the ditches receive the whole drainage of the town. The water works are unworthy of the name, as they consist simply of a large filter and settling tanks, through which the water flows by gravity, no pump or other mechanical appliance being used. There is so little natural "head" that in some houses of the town it is necessary to have the outlets in pits in the floor in order to procure the water. The filter referred to is in a filthy condition. As far as the natural supply is concerned it is excellent in quality and sufficient in quantity to give the town an excellent water service, provided a suitable pumping station be constructed. The supply can be cut off one-half mile east of the city by closing the gates of the ditch. This point can easily be protected from the cuartel.

No sewer system, excepting the aforementioned ditches. The town is lighted by electricity furnished from the Havana Central Electric Railway plant. There is a small, privately owned coal-gas works on the western edge of town which formerly furnished gas for street lighting. Many of the residences and stores have acetylene gas generators installed.

Barracks: Capacity, one battalion; on eastern edge of town; was used as Spanish barracks; built of brick and covered with stucco; sanitary conditions good; no water in barracks. Modern water-closets not installed.

Stables: None. The packing house near railroad station could be used as a stable for two troops. Good grazing and room for picket lines close to irrigation ditch in front of barracks. More ground suitable for grazing, picket lines, and camp sites is situated at western end of town.

Transportation corrals: None available. Good location on open ground near irrigation ditch and on good road 100 yards in rear of barracks.

One hospital completely equipped. Several packing houses suitable for same purpose could be used in emergency after being cleaned and put in sanitary condition.

Quartermaster and commissary storehouses: Several packing houses are suitable for the purpose. The packing houses near the railway and residences near electric railway are suitable.

The ayuntamiento building is in the center of town; railway station (steam) in western part of town. The electric railway station is two blocks south of ayuntamiento building. Post and telegraph offices are east of central part of town. No telephone system established.

Ice plant situated about 300 yards east of barracks, eastern part of town. There are camp sites, possessing desirable sanitary features for command of 10,000 men; plenty of water, wood, and grazing.

Some few old Spanish fortifications on macadamized pike from Güines to Havana near deep cut in hills north of town. Barracks are loop-holed. Old Spanish trocha about the town dating from 1898.

United Railroads of Havana reaches town by circuitous route. Distance from Havana by rail, 45 miles. There are good facilities for entraining and detraining. Freight depot could be used for commissary and quartermaster stores. The Havana Central Railroad from Havana passes through the town. The station is new; built of cement; about 200 feet long; cement platform all the way around. It is connected by switch with the United Railroads of Havana.

All roads out of town are impracticable except turnpike or calzada to Havana. Pack-train transportation would be necessary on other roads. In case the town were to be defended the easiest and most probable defense would be along the north, to protect from troops coming overland on turnpike. The town would be hardest to defend from the east and that would be the proper and logical side to attack.

Alderete.—Barrio. A rural district, containing a store and 2 houses known as Zaragoza; situated on the Catalina-Ganuza road.

Babiney Prieto.—Barrio. A rural district. No point or village in this district.

Bayamo.—Barrio. A rural district, which contains no village or store.

Barbudo.—Barrio. A rural district which contains the sitio of Rosario. The sitio is 11 miles by road due south of Güines on the south coast. It contains 4 or 5 houses.

Cambre.—Barrio. A rural district which contains a store known as El Pico, situated on the Catalina-Güines road.

Candela Norte.—Barrio. A rural district, containing a store and 2 houses at La Conocida on the Havana-Güines calzada, and a store on the road which runs from the Havana-Güines caldaza to La Catalina.

Candela Sur.—Barrio. A rural district containing the sitios of Candela, Gamarra, and Mateo Reyes. Candela is about 4¼ miles northwest of Güines on the Havana-Güines calzada near a cut through the hill called Loma Candela and contains 15 or 20 houses.

Gamarra.—Sitio. On the Havana-Güines calzada and contains 2 stores and 4 houses.

Mateo Reyes.—Sitio. Situated on the same calzada at the 43 kilometer post. It is a small place.

La Catalina.—Barrio and village. A scattering village of 1,490 inhabitants, situated on the branch of the U. H. R. R. which runs northeast from Güines, through Catalina, and joins the Matanzas branch near Ceiba Mocha. It is divided into two barrios or wards, viz, Norte and Sur. No industries except the shipping of sugar cane during the grinding season. Water supply is obtained from wells within the village, but about 1 mile west of the village, on the road leading to Güines, is a large spring of fresh water, sufficient for a command of any size. Camps and corrals should be on the western side of village in order to use the water from this spring.

Post-office is on main street. Telegraph office at the railroad station. The railroad station is on the southern edge of the village and has several long side tracks to facilitate the loading of sugar cane on the cars. There are three or four stone buildings in the vicinity of these tracks that could be converted into storehouses. The village has an old Spanish trench surrounding it; built in the war of 1895–1898.

Charcas.—Barrio. Contains the station of Melena on the United Railroads of Havana, 36.5 miles from Havana, and the ingenio Mercedita is at this station. Station contains side tracks amounting to about 1 mile. A macadam road about 2 miles long and a narrow-gauge track connect the station with Melena del Sur. In this district there is also a store at the farm El Rosario.

Costa de Guara.—Barrio. A rural district. No village in the district.

Costa de Melena.—Barrio. A rural district. There is a store called La Luisa situated at the ruins of La Luisa sugar mill.

Cruz.—Barrio and sitio. A rural district. There are 2 stores within this district; one of these is called Ocejo, and is on the Havana-Güines calzada; the other, called Cruz, is at the Cruz farm on the Güines-Catalina road.

Encarnación.—Barrio. A rural district. No village or store in the district.

Gabriel.—Barrio. This district contains the town of Río Seco.

Río Seco.—Town. Has 7 stores and 60 or 70 small houses. Population, about 440. This station is 48.6 miles from Havana, and 4.3 miles from Güines on the United Railroads of Havana, and the side tracks total in length 1,200 yards. The water supply is obtained from ditches leading from the Mayabeque River, and is not good. Country level, and planted in sugar cane.

Guanajo.—Barrio and sitio. A rural district; contains a store called Guanajo on the Guanajo road.

Guara.—Barrio and town. A small, old, and extremely dirty town situated on the Güines branch of the U. H. R. R. about 8 miles west of Güines. Has a population of 1,020. There are no very large houses, but there are a number that could be converted into barracks in case of necessity. These are all in the immediate vicinity of the plaza. Water supply obtained from wells within the town. Telegraph station is at the railroad depot. Depot has a frame warehouse about 100 by 30 feet, and there are a number of small stores near the tracks that could be converted into storehouses. There are three side tracks; one about 400 yards long, and two about 200 yards long. Country on all sides is level, and either cultivated or pasture land.

Jobo.—Barrio. A rural district, in which is situated the sugar mill El Jobo (San Miguel).

Lechuga.—Barrio and sitio. A rural district. The sitio consists of a store and 2 or 3 houses, and is 11 miles by road northeast of Güines.

Lechugas.—Barrio. A rural district in which is situated the sugar mill San José. It contains a point called Lechuga, which is a store on the Güines-Melena road. It also contains a store called Cascajaba, situated on the Güines-Melena road, 8 miles southwest of Güines.

Melena del Sur.—Barrio and town. A well-kept town, with a population of 1,615. Situated about 2 miles south of the station of Melena on the Güines branch of the U. H. R. R. and 10 miles by road southwest of Güines. The sugar mills Mercedita and San José are both near this town and contribute toward its support. Water supply obtained from two or three wells. There are no large houses, but a number of those along the one main street could be converted into barracks in case of necessity. A narrow-gauge railroad track runs from the station of Melena to the town, and there are a number of small houses, near this track and facing the plaza, that could be used as storehouses. Country on all sides is level and cultivated. Camps and corrals should be made on the southeastern edge of town, near the main well. At the station of Melena is the sugar mill Mercedita, and there are a number of long side tracks at this place that would give every facility for loading and unloading troops and supplies. Melena del Sur is connected with the station of Melena by a new macadam road about 2 miles long, and with Güines, Guara, Batabanó and San Antonio de las Vegas by unimproved dirt roads.

Navío.—Barrio and sitio. A rural district. The place of this name is a store on the Havana-Güines calzada. District also contains a store of Lucas Rodríguez on the Guara-Nazareno road.

Nombre de Dios.—Barrio. A rural district in which are situated the sugar mills Nombre de Dios and Providencia. Also contains the sitio of Flete.

Flete.—Sitio. Consists of a store and 4 or 5 houses.

Ocaña.—Barrio. A rural district which contains no village or store.

Ponce.—Barrio. District contains a store, called Flor de Mayo, situated on the Camino Real of Güines.

Rubio.—Barrio. A rural district containing the sugar mill Amistad and the sitios La Libertad and La Paloma.

La Libertad.—Sitio. On the Güines-San Nicolás road at the bridge El Francés.

La Paloma.—Sitio. On the road from Güines to Pipián, and contains 3 stores and 3 houses.

Ruiz.—Barrio. A rural district. Contains no sitio or village.

San Blas.—Barrio. A rural district containing the sitio El Cangre.

El Cangre.—Sitio. On the Güines-Pipián road; contains a store and 5 houses.

San José.—Barrio. A rural district containing the sitio Ojo de Agua.

Ojo de Agua.—Sitio. Situated at a spring 1 mile southwest of Catalina on the Catalina-Güines road. Contains a store and 4 houses.

San Julián de Güines.—Barrio. A rural district west of Güines.

San Julián de Melena.—Barrio and sitio. The railroad station and village of Palenque are situated in this barrio. The sitio called San Julián is a finca 5¾ miles west of Güines. It contains 2 houses, and the Río Cotillo flows nearby.

Palenque.—Village. A railroad station on the United Railroads of Havana, almost 4 miles west of Güines. It contains a store and 15 houses. Has a covered station and about 1,400 yards of side tracks and switches. From this station spurs run to the sugar mills Nombre de Dios and Providencia.

San Marcos.—Barrio. A rural district which contains no village or store.

San Nicolás.—Barrio and town. A town of 2,326 inhabitants, situated on the U. H. R. R., about 9 miles east of Güines. Is built along one principal street.

No houses particularly suitable for barracks and there are no stables of any size in the town.

The water supply is obtained from a well in front of the church; operated by a windmill. This well does not always afford a sufficient supply of water for the town, and the water question is often a serious one.

The depot has a large warehouse and there are several other buildings in the immediate vicinity which could be converted into storehouses.

The best place for corrals and camps is a level field along the railroad on the north edge of town.

The telegraph station is at the railroad depot.

There are a number of side tracks at the depot for the loading of cane cars.

The best place for a hospital in this vicinity is the residence of Gómez Mena, at the sugar mill Teresa, about 3 miles southeast of San Nicolás. This is also the best place for a camp or to station troops, as there is shelter for men and animals and an abundant supply of water.

Unimproved roads lead from this town north to La Catalina; northeast to Pipián and Madruga; east to Las Vegas, San Antonio, and Los Palos; and west to Güines.

There is not much choice as to a point of attack on this town, as the country is level and about half open on all sides. An approach from the northwest would probably give the most protection.

TOWNSHIP OF MADRUGA (CAPITAL, MADRUGA).

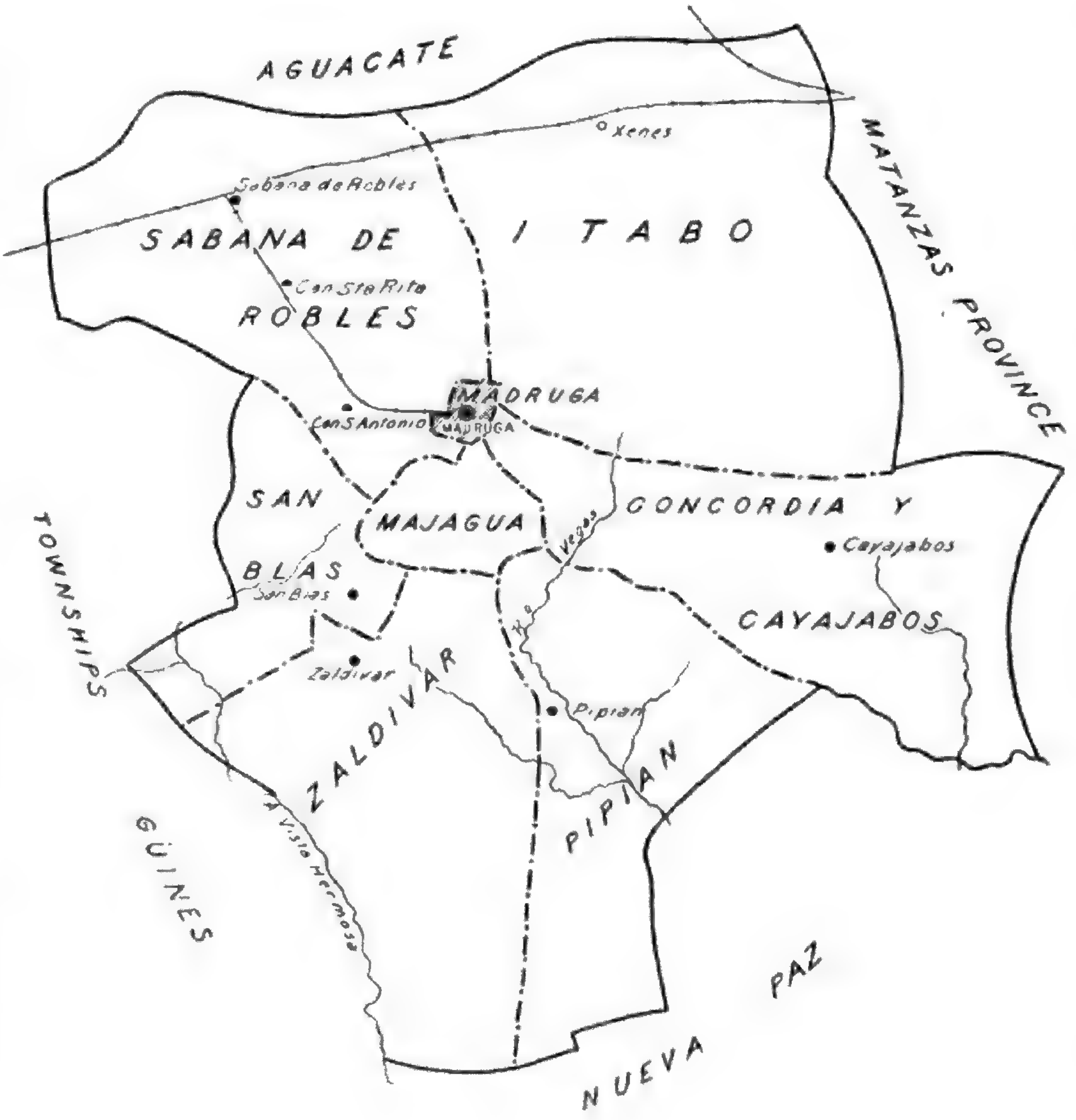
Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Madruga	Este	Urban		737
	Oeste	do		1,438
Concordia	Concordia y Cayajabos	Rural	5	564
Cayajabos.				
Itabo	Itabo	do	5	588
Xenes.				
Majagua	Majagua	do	3	304
Pipián	Pipián	do	4	733
Sabana de Robles	Sabana de Robles	do	2.5	886
San Blas	San Blas	do	3.7	597
Zaldívar	Zaldívar	do	4	1,274

Madruga.—Town. Built on a hillside and overlooked from the north and east by high grassy hills. The ground to the south and west is rolling and cultivated. Divided into two barrios or wards, viz, Este and Oeste. The town has 2,175 people. Houses are of stone and wood with tile roofs.

The water supply is obtained from surface wells, which are in almost every yard. The water seems to be of good quality and abundant.

There are no buildings especially suitable for barracks, but there are many houses that could be used for that purpose. These are all in the immediate vicinity of the plaza and are now used as stores and shops in the front part and living rooms in the rear. The hotel on calle Céspedes near the plaza would hold one company. There are two long, one-story buildings on the street near the railroad depot; each

MADRUGA TOWNSHIP



would accommodate one full company. The houses are now used as small apartments.

All of the houses have small stables. There are two inclosed yards just north of the depot that could be converted into a corral for a large number of animals; water to be obtained from the surface well, or the animals watered in the small stream north of the town.

A small warehouse at the depot, about 18 by 45 feet, could be used as a storehouse for a small force. At the corner of the street leading from the depot to the town and about 1 block from the former is a large one-story house, built of stone and having heavy doors and windows; would make an excellent storehouse for a large force.

A large two-story building on the plaza at the corner of calle Céspedes would make an excellent hospital; would hold 50 beds without crowding. It is now used as a hotel (San Luis) and is open in the summer for the tourists that go to Madruga for the sulphur baths. There are a couple of smaller summer hotels in the town that could also be used as hospitals.

The best place for a camp is on the hilly ground northeast of the town. Here there is a small clear stream from which water can be obtained. The ground is high, generally dry, and is not cultivated.

This ground is commanded by the hills to the north and east, but the same objection could be found to any camp close to Madruga, and the placing of the camp near the hills would permit the placing of a detached post on the top of the hills to prevent their being occupied without warning.

The post-office and telegraph office are on the plaza.

The railroad depot is on the south edge of the town about 3 squares from the plaza.

Concordia y Cayajabos.—Barrio and sitios. A rural district. The sitio of Concordia consists of 2 houses and at the point Cayajabos, which is a demolished sugar mill, are 2 houses.

Itabo.—Barrio and sitio. A rural district. The point of this name has 2 houses. This district also contains Xenes, a station on the U. H. R. R.; has a small warehouse and 400 yards of side track.

Majagua.—Barrio and sitio. A rural district. Point of this name has one house.

Pipián.—Barrio and village. A small village of 270 inhabitants situated about 4 miles south of Madruga. It is built along one short main street and has no large buildings.

Water supply obtained from Río de la Industria, a creek which skirts the village to the east, and from a spring on the bank of the creek. Water is good and abundant.

The country in the vicinity is hilly and a wooded mountain about 1 mile to the east overlooks the village.

Corrals and camping grounds should be placed on the high ground east of the river. There is room for a camp of one battalion at the edge of the village on the west bank of the stream. Madruga is the nearest railroad station. Unimproved roads lead to Madruga, San Nicolás, Las Vegas, Los Palos, and Güines.

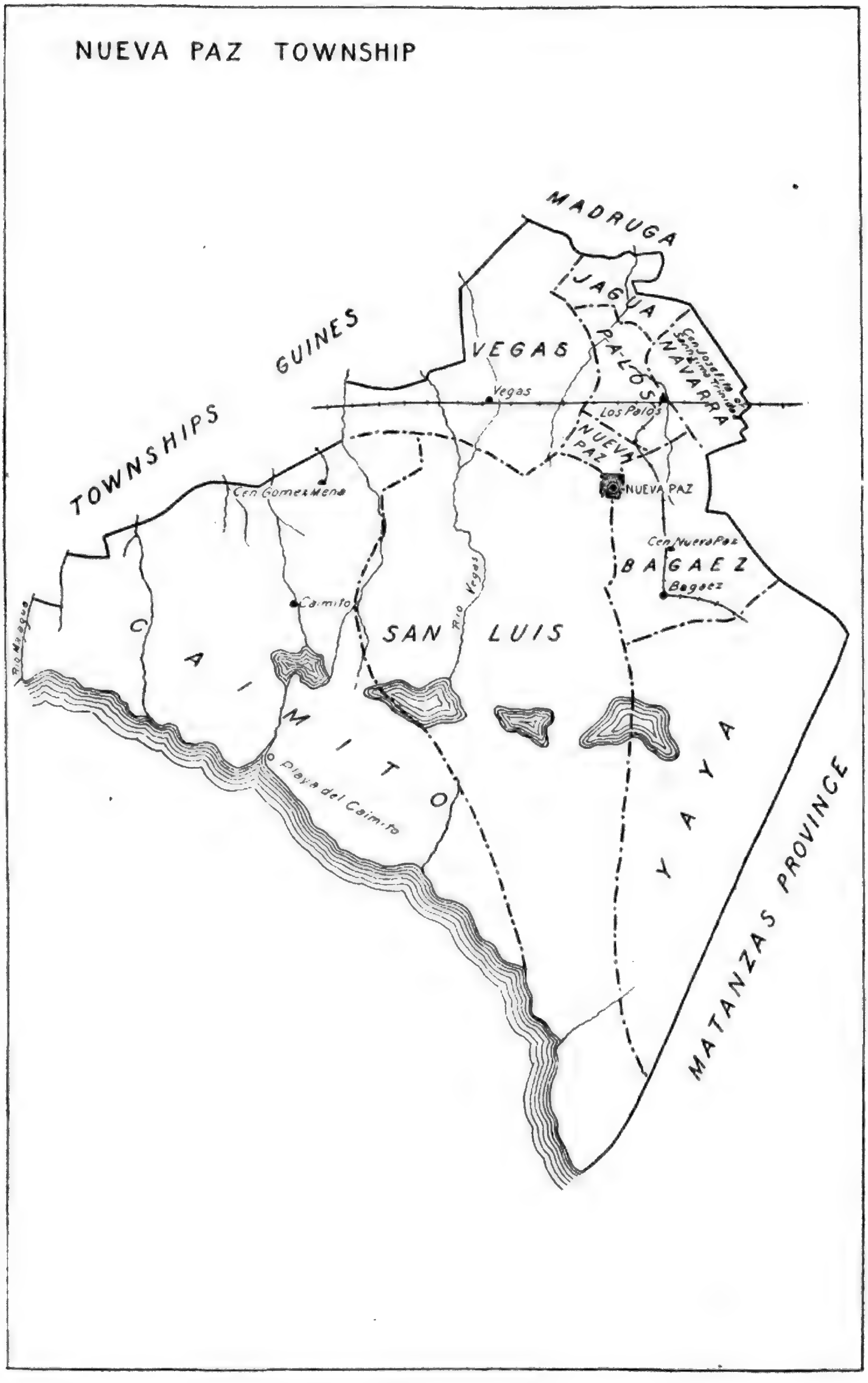
Sabana de Robles.—Barrio and sitio. A rural district. The place of this name is 3 miles by road northwest of Madruga at the junction of the Madruga Branch, United Railroads of Havana, with the main line. There are 2 small houses, a masonry railroad station, and 4 side tracks, amounting in length to 700 yards. Land in the vicinity is flat and swampy in the rainy season. Water obtained from surface wells and not good. District also contains Santa Rita and San Antonio sugar mills.

San Blas.—Barrio and sitio. A rural district. Point of this name has 4 houses and is 3 miles by road southwest of Madruga.

Zaldívar.—Barrio and sitio. A rural district. The place of this name consists of 2 houses and is 4 miles by road south of Madruga.

TOWNSHIP OF NUEVA PAZ (CAPITAL, NUEVA PAZ).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Nueva Paz	Nueva Paz	Urban and rural.		2,379
	Bagaez	Rural	3	1,428
Caimito	Caimito	do	8.7	1,351
Playa del Caimito.				
	Jagua	do	4.8	455
	Navarra	do	3.7	830
Los Palos	Palos	do	2.5	2,574
	San Luis	do	3.6	640
Vegas	Vegas	do	5.6	1,862
	Yaya	do	9.3	677


NUEVA PAZ TOWNSHIP

Nueva Paz.—Barrio and town. A small town near the eastern border of Havana Province and about 3 miles south of Los Palos. Contains 468 houses, all told, and has a population of 2,379.

The cane fields in the vicinity and the sugar mill Nueva Paz seem to be the main support of the town.

The water supply is obtained from three or four wells in the town. Water is not of very good quality, and the supply is hardly adequate.

There are no large buildings. Two or three masonry buildings at the north edge of town could be used as commissary and quartermaster storehouses, and the buildings in the vicinity of Central Park could be converted into barracks in case of necessity.

The best place for transportation corrals is near the well by the cemetery, on the southwestern corner of the town.

Post-office and telegraph office is on Libertad street just east of Central Park and north of the church.

A narrow-gauge railroad runs to the sugar mill Nueva Paz and connects with a branch which runs to the U. H. R. R. at Los Palos.

The ground is level and cultivated on all sides, but no camps of any size could be made, due to the lack of water.

Roads lead out of town as follows: A macadam road north of Los Palos; an unimproved road west to Las Vegas and San Nicolás; an unimproved road south to Guanamón; and one southeast to sugar mill Nueva Paz.

The best place for troops in this vicinity is at the sugar mill Nueva Paz, about 3 miles southeast of the town, where abundance of water and shelter for troops are to be found.

Bagaez.—Barrio. A rural district. No point of this name in the district; contains central Nueva Paz.

Caimito.—Barrio and sitio. The barrio is a rural district southwest of Nueva Paz and contains central Gómez Mena (Teresa). The sitio is 4 miles southeast of San Nicolás and about 9 miles southwest of Nueva Paz, at the intersection of roads from each place. It contains a general store and two or three houses. There is also a point in the barrio called Playa del Caimito. It is situated 4 miles south of Caimito and consists of a few shacks.

Jagua.—Barrio. A rural district. No point of this name in the district.

Navarra.—Barrio. A rural district. No point of this name in the district; contains central Santísima Trinidad (Josefita).

Los Palos.—Barrio and town. A small town situated on the U. H. R. R. near the eastern border of Havana Province, 2.5 miles northeast of Nueva Paz. Population, 2,100. Water supply is obtained from wells within the town. There are no large buildings especially suitable for barracks. All the buildings of any size are on the one short main street, which runs south from the depot. Corrals should be established north of the depot, on the open ground, in order to utilize the well at the depot for watering. The station of the railroad has a large masonry warehouse, and there are a number of buildings in the immediate vicinity which could be converted into storehouses. The depot has about 1,500 yards of side track. Telegraph office is at the depot. Country on all sides of Los Palos is level and about half open. A macadam road leads south to Nueva Paz; an unimproved road runs north to Pipián; the road to Las Vegas is through Nueva Paz. The best place for troops in this vicinity is at the sugar mill Josefita, about 1 mile north of Los Palos, where there is shelter for men and animals, and an abundance of water.

San Luis.—Barrio. A rural district. No point of this name in the district.

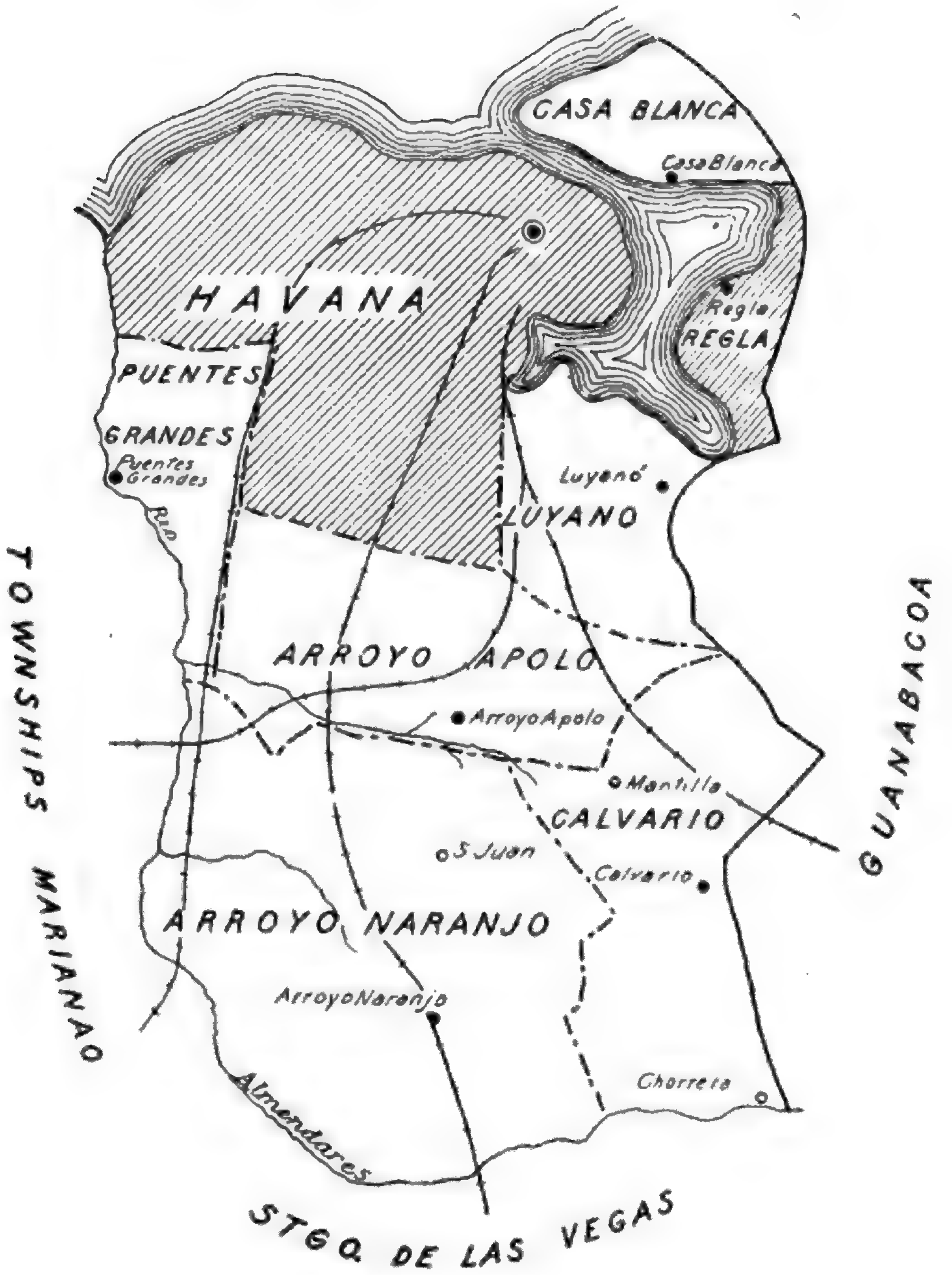
Vegas.—Barrio and town. A scattering town of about 950 inhabitants, situated 5.6 miles northwest of Nueva Paz on the U. H. R. R. and near the eastern border of the province. The town is scattered along both sides of the railroad, and has two or three buildings that could be used as storehouses if necessary. Ground is level and cultivated on all sides. Water obtained from surface wells. Has a number of side tracks, amounting in length to 1,000 yards.

Yaya.—Barrio. A rural district. No point of this name in the district.

JUDICIAL DISTRICT OF HAVANA.

Township:	Population.
Havana	302, 526

HAVANA TOWNSHIP



TOWNSHIP OF HAVANA (CAPITAL, HAVANA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Havana	Arsenal	Urban		5,706
	Atarés	do		8,520
	Ceiba	do		6,702
	Cerro	do		17,321
	Colón	do		9,214
	Chavez	do		8,446
	Dragones	do		7,244
	Guadalupe	do		7,761
	Jesús del Monte	do		16,018
	Jesus María	do		4,259
	Martí	do		5,735
	Monserrate	do		8,152
	Paula	do		4,131
	Peñalver	do		9,477
	Pilar	do		6,747
	Príncipe	do		14,916
	Pueblo Nuevo	do		9,915
	Punta	do		8,711
	San Felipe	do		3,825
	San Francisco	do		4,540
	San Isidro	do		6,908
	San Juan de Dios	do		5,264
	San Lázaro	do		24,894
	San Leopoldo	do		7,911
	San Nicolás	do		6,334
	Santa Clara	do		5,030
	Santa Teresa	do		7,268
	Santo Angel	do		4,386
	Santo Cristo	do		4,464
	Tacón	do		7,059
	Templete	do		3,047
	Vedado	do		11,130
	Villanueva	do		7,504
	Vives	do		5,525
Arroyo Apolo	Arroyo Apolo	Rural	3.1	4,533
Arroyo Naranjo	Arroyo Naranjo	do	6.2	2,015
San Juan.				
Calvario	Calvario	do	5.6	1,086
Chorrera.				
Mantilla.				
Casa Blanca	Casa Blanca	Rural and urban.		3,182
Luyanó	Luyanó	do	3	2,491
Puentes Grandes	Puentes Grandes	Rural	4	2,266
Regla	Primero de Regla	Urban		2,845
	Segundo de Regla	do		3,380
	Tercero de Regla	do		3,307
	Quarto de Regla	do		2,929

City of Havana.

HISTORICAL SKETCH.

Havana does not enjoy the distinction of being the first capital of the island of Cuba. This honor belongs to Baracoa. In 1518 Diego de Velásquez established, on the south coast, at the place where Batabanó now stands, a town named San Cristóbal de Abana. The settlement was afterwards moved to the north coast on the site now known as Chorrera, at the mouth of the Almendares River, and thence it was again transferred and established at the Puerto de Carenas, as Havana Bay was formerly called.

In time the name San Cristóbal de Abana became shortened to Havana.

In 1538 the town was destroyed by French buccaneers, but was soon restored by Hernando (or Fernando) de Soto, who erected the first fort—La Fuerza.

In 1550 the residence of the captain general and the seat of government were transferred to Havana from Santiago de Cuba, which was at that time the capital of the island.

From 1551 to 1555 the city was repeatedly plundered by Jacob Sores and his band of pirates, and in 1585 was threatened by Drake. For the protection of the city against the numerous bands of pirates which infested the West Indies, Philip II ordered, and Capt. Gen. Don Juan de Tejeda caused the erection of the Batería de la Punta and the much celebrated "El Castillo del Morro," of which so much has been written during the war just passed.

From the beginning of the seventeenth century Havana seems to have suffered less from pirates, and to have passed the next one hundred and fifty years of its life in comparative peace.

In 1634 the importance of the place received royal recognition, and by the royal cedula of May 24 Havana was called "Llave del Nuevo Mundo y Antemural de las Indias Occidentales" [Key of the New World and Bulwark of the West Indies].

In 1646 defensive towers were erected on the coast at Chorrera and at Cojímar.

In 1652 Governor Gelder proposed the construction of a canal from the shore of the bay, where now stands the arsenal, to the gulf near the present calzada de San Lázaro, partly as a defensive work, partly for the purpose of purifying the fever-breeding bay. Instead of that, a defensive wall around the city was constructed at an enormous cost. This wall was demolished and removed in 1880.

In 1665 the city was confirmed in the use of a coat of arms, long before adopted.

In 1724 the navy-yard, now the arsenal, was erected.

During the year 1730 a new wall was begun from La Punta along the shore of the bay, and a part of it still serves as a sea wall.

In 1762 the English, under Admiral Pococke and Duke of Albemarle, attacked the city, and on August 14, after a two months' siege, Havana was surrendered, but was restored to the Spaniards on February 10, 1763, by the treaty of Paris, in exchange for the Floridas.

The capture of the city by the English proved such a valuable lesson to the inhabitants that the thirty-five years which followed (1763–1798) saw the beginning and completion of all the great defensive works now existing around the city.

In 1782 was published La Gaceta de la Havana, the earliest newspaper in the island.

In 1780 the Jesuits were expelled from the city and their church became the cathedral of Havana.

The urn containing the ashes of Columbus was deposited in the Havana Cathedral in 1796. It was taken to Spain after the Spanish-American war.

The port of Havana, in common with others of the island, was by law opened to foreign commerce in 1818.

Many useful institutions, as well as material improvements and embellishments of that city, are mainly due to Capt. Gen. Don Miguel Tacon, such as the fire brigade, the theater which bears his name, and several of the finest public promenades.

The first railway on the island, running from Havana to Güines, was commenced in 1835; and in 1837 the first ferry was established between the city and Regla, a suburban town just across the bay.

In 1850 the first steamship line was established, between Cádiz and Havana.

From 1868 to 1878 occurred the first Cuban revolution, which affected Havana's commercial interests very little.

From 1896 to 1898, during the revolution just past, under the régime of General Weyler, the city's commercial interests suffered greatly.

From April 22 to August 12, 1898, the city was blockaded by the American fleet, and for a portion of this time the inhabitants were on the verge of starvation.

At noon on January 1, 1899, the city was formally occupied by the American forces following the treaty of peace between Spain and the United States.

The city was formally transferred to the Cuban Republic at noon, May 20, 1902.

COAT OF ARMS.

The coat of arms mentioned in the historical sketch consists of a shield bearing three castles, argent, upon a field of azure, and a golden key—an allusion to the three fortifications guarding the mouth of the harbor and to Havana being the key of the New World. Above is a crown, and for the border the necklace of the Golden Fleece. The coat of arms was adopted early in the seventeenth century, but was not confirmed by royal order until 1665.

CLIMATE AND METEOROLOGICAL CONDITIONS.

The climate of Havana is essentially tropical, although the excessive heat is tempered by the sea breeze, which blows regularly every morning, and the "terral" (land breeze), which blows every evening.

There are two seasons, the dry or so-called winter season, from November to May, when very little rain falls, and the wet or summer season, which usually begins early in June and lasts until the middle of October, during which period scarcely a day passes without heavy rains, frequently accompanied by violent thunder and lightning.

The mean annual temperature is 77°. The range of the temperature between the range of the hottest month and that of the coldest month is from 82° to 71°, or only 11°.

In January it is warm but not hot during the day, and the evenings are cool. The mean annual rainfall at Havana, derived from observations of many years, is 52 inches. The record shows, in different years, a rainfall ranging from 40 to 71 inches.

Rarely are there more than twenty rainy days in any one month, and the average is from three to ten. The rainfall generally occurs in the afternoon, there being about seventeen days a year in which it rains in both the forenoon and the afternoon.

HILLS AND ELEVATIONS.

There are many important hills and elevations within or adjacent to the city of Havana. The highest is called Jesus del Monte, 220 feet above the level of the sea.

Loma de Mazo, the most important hill of the group from a strategic point of view, received the name of "The Key Hill" on account of its advantageous position.

Many of these hills and elevations are surmounted by castles or forts.

Castillo del Morro, one of the oldest, is situated at the entrance of the harbor on an elevation 75 feet above sea level.

Castillo de la Punta is diagonally opposite Morro Castle, farther on at the entrance.

Castillo de la Cabaña dominates the playa (seacoast).

Castillo del Príncipe, 2½ miles distant, on the hill of same name, 150 feet in height, juts out into the southern valley.

The hills of Atarés and El Cerro must also be mentioned.

A tabulation of permanent triangulation points established by a topographical field party is on file.

TERRITORIAL DIVISIONS.

While in reality the city is not divided, it is commonly recognized as being in two parts, viz, the intramural or old town, between the bay and the site of the ancient walls, and the extramural, or new town, beyond the walls.

Not far from La Punta, at Monserrate and Refugio streets, are remnants of the old city wall. Another fragment has been preserved on Monserrate street, near Teniente Rey. These ancient landmarks indicate the boundary of old Havana. The wall extended from the shore of the harbor east of the arsenal along a line east of the Prado to the water front again at a point in line with the cárcel.

The following outlying sections of the city are considered as being within the city limits: Regla and Casa Blanca. In addition the following suburbs are in the municipality of Havana: Puentes Grandes, Luyanó, Arroyo Apolo, Arroyo Naranjo, and Calvario.

Marianao and Guanabacoa are residence suburbs and are about 6 and 3 miles, respectively, from the city.

The summer resort of Cojímar is 3½ miles east of the city.

STREETS.

In the old town the streets, though for the most part regular and well paved, are extremely narrow, the sidewalks being barely wide enough for two pedestrians to pass.

They vary in width, but generally they are 6.8 meters (about 22 feet) wide, of which the sidewalks occupy about 7.5 feet. In many streets the sidewalk at each side is not even 18 inches wide.

The older a Cuban city or any part thereof, the narrower the streets.

As time extended the city farther and farther beyond its walls, the streets gradually became wider, until some attained the ordinary dimensions usually found in the United States.

Matanzas, Cárdenas, and Cienfuegos were founded subsequently to Havana in the order named; therefore Matanzas has many narrow streets, but not as narrow as Havana; Cárdenas few, and Cienfuegos none.

The streets of Havana are well paved and kept exceptionally clean, even on the water front.

As there is no sewer system, many of the streets are flooded in the rainy season after a heavy rain.

The city has a good electric street railway system, whose lines extend not only through many of the narrow streets of the city, but to the suburban towns of Vedado, Cerro, Jesús del Monte, and Marianao.

ARCHITECTURE.

The prevailing style of architecture is almost identical with that of the south of Spain.

The walls of most of the houses in Havana are built of "mampostería" or rubble masonry, a porous material which freely absorbs atmospheric as well as ground moisture. The mark of this can often be seen high on the walls, which varies from 2 to 7 feet in the houses generally.

The walls themselves are very thick, often painted within and without in showy colors, especially blue, green, or yellow, and sometimes a mingling of all three. The roofs are excellent, usually flat, and constructed of brick tiles. The windows are, like the doors, unusually high, nearly reaching the ceiling, which, in the best houses only, is also unusually high. The windows are seldom glazed, but protected by strong iron bars on the outside and on the inside by solid wooden shutters, which are secured, like the doors, with heavy bars or bolts, and in inclement weather greatly interfere with proper ventilation. Fireplaces with chimneys are extremely rare, so that ventilation depends entirely on the doors and windows, which, it should be stated, are by no means unusually large in most of the sleeping rooms of the poor. Generally in Havana, less generally in other cities, the entrances and courtyards are flagged with stone, while the rooms are usually floored with tile or marble. With rare exceptions the lowest floor is in contact with the earth. Ventilation between the earth and floor is rarely seen in Cuba. In Havana the average height of the ground floor is from 7 to 11 inches above the pavement, but in Havana, and more frequently in other Cuban towns, one often encounters houses which are entered by stepping down from the sidewalk, and some floors are even below the level of the street. In Havana some, in Matanzas more, in Cárdenas and Cienfuegos many of the floors are of the bare earth itself, or of planks raised only a few inches above the damp ground.

About two-thirds of the population live in densely inhabited portions of the city where the houses are closely in contact with each other. There are about nine inhabitants to every house in Havana. Generally, one-story houses have four or five rooms; but house rent as well as food and clothing are so high that it is rare for workmen, even when paid $50 to $100 per month, to enjoy the exclusive use of one of these little houses.

The average house lot in the city is about 27 by 112 feet. In the densely populated portions of the city the houses generally have no back yard, properly so called, but a flagged court, or narrow vacant space into which sleeping rooms open at the side, and in close proximity with these, at the rear of this contracted court, are located the kitchen, the privy, and often a stall for animals. In the houses of the poor, that is, of the vast majority of the population, there are no storerooms, pantries, closets, or other conveniences for household supplies. These are furnished from day to day, even from meal to meal, by the corner groceries; and it is rare, in large sections of Havana, to find any one of the four corners of a square without a grocery.

Many of the residences in the extramural portion of the city are constructed in a more modern style, particularly in El Cerro (The Hill), a handsome street, 3 miles long, leading to a village of the same name, and in Vedado and Marianao.

PUBLIC EDIFICES.

Foremost among the public edifices of Havana is the Cathedral, erected in 1724 and used by the Jesuits as a college till 1789.

Santa Catalina and San Juan churches, dating from the sixteenth century, and the Church of San Augustin from the beginning of the seventeenth century, are noteworthy for the richness and splendor of their decorations.

El Templete (the Little Temple) is curious as having been erected in 1828 on the spot where the mass was first celebrated in 1519.

On the west side of the Plaza de Armas is the President's residence, a yellow two-story edifice, with a handsome colonnade in front; it is occupied by the President, his aids, and the offices of the several government departments.

The custom-house fronting on the bay is a spacious building, devoid of architectural interest.

The customs warehouse was formerly the church of San Francisco, consecrated in 1737.

La Casa de Beneficencia is a large building, with beautiful grounds. It comprises an orphan asylum and an asylum for vagrants, established about 1790.

La Cárcel (prison) is a vast quadrangular structure, erected in 1771, near the mouth of the bay.

The University is also worthy of mention.

El Tacón, a theater built in 1838 under the auspices of Captain-General Tacón, whose name it bears, is said to be equal in size to La Scala, of Milan. It is capable of accommodating about 3,000 persons. Now known as the National Theater.

HOSPITALS, CHURCHES, SCHOOLS, AND LIBRARIES.

The most important hospitals are the Mercedes; No. 1; Las Animas, where the experiments for yellow fever were made; the Quinta de Higiene, for venereal diseases; the Tamayo Dispensary, for tuberculosis; La Caridad and La Creche; the Paula (for women) and San Lázaro (for lepers).

There is also a hospital for the insane at Mazorra, near Vento Spring.

In the city are 21 Catholic churches and 6 Protestant churches. The principal schools are two conservatories of music, a school of painting and drawing, institute or high school of arts and trades.

The principal libraries are the National, in La Maestranza, Cuba street, and the Sociedad Economía, 62 Dragones street.

Under the proper heading will be found the location and description of such of these buildings as can be used for barracks, hospitals, or storehouses.

PUBLIC PARKS.

A system of parks, promenades, and drives extends from the water front on the Gulf through the center of the city out to Príncipe Hill.

The central parkway is the Prado (Paseo de Martí) which connects Colón, India, and Central parks with Punta and Malecón.

Beyond Colón Park are the drives La Reina and Carlos III or Tacón.

During the first American military occupation the Prado was largely remodeled and concrete walks were laid. Under a project prepared by the chief engineer, Maj. William M. Black, Corps of Engineers, the Malecón was built and the construction of Gulf avenue commenced. This avenue is destined to become a parkway and drive extending along the Gulf from the Malecón, at the entrance to the bay, to the Almendares River.

Other small parks or squares are: The Plaza de Armas, in front of the President's palace; the Plaza de Monserrate, at the head of Obispo street; the Plaza de Catedral or "Discusión," at San Ignacio and Empedrado streets; the Plaza del Cristo, at Teniente Rey and Villegas streets; the Plaza de San Juan de Dios, at Aguiar and Empedrado streets.

HAVANA BAY AND HARBOR.

The entrance to the port of Havana may be easily recognized by the Morro Castle and light-house. The land to the eastward of the city, until near the Jaruco or Iron Mountains, 18 miles distant, is about 200 feet high, and the shore bold and steep-to.

Nine miles south of the Morro there is a remarkable isolated hill, 732 feet high, with two round hummocks, called the Managua Paps. This hill is not only an excellent guide for Havana when coming from the northward, but useful also as a point of departure.

The channel for about one-half mile is not more than 200 yards wide; farther in it widens, opening into a basin of irregular shape, 2¼ miles long and from one-half to 1 mile wide.

A light-house stands on Morro Castle, at the entrance of the harbor, and exhibits a white light, revolving every half minute, at 144 feet above the sea, and should be visible 18 miles.

There is on file all information of military value respecting the harbor, and also a map, showing soundings.

LOCATION, POPULATION, AND INDUSTRIES.

The city is situated on a level peninsula on the west side of the Bay of Havana.

The population of the city proper is 297,159.

The principal industries of the city are the cigar and cigarette factories; plants for the manufacture of rum, preserves, and sweets; cooperage and boxmaking, subordinate to the tobacco industry. There are also plants for the manufacture of cement, beer, shoes, iron, paper, soap, etc.

All of the industries are susceptible of great development.

The principal exports to the United States consist of tobacco, fruit, wax and honey, sugar and molasses.

Of the exports, about 54 per cent is sugar and its derivatives; 33 per cent tobacco, crude and manufactured; 9 per cent other agricultural products and products of rural industries; 3 per cent products not depending upon agriculture, such as ore, asphalt, etc.

The principal imports from the United States are cotton goods, boots and shoes, machinery, and foodstuffs. Practically all the flour, corn, and lard used are imported from the United States.

WATER SUPPLY.

The water supply of Havana comes from the Vento spring, situated at the edge of the Almendares River, 6.2 miles south of the Palatino pumping station. The water from the spring, which is abundant and of excellent quality, is collected in a small reservoir which is built around the spring in the form of a basin, and carried in a masonry aqueduct to the distributing reservoirs at Palatino pumping station. This aqueduct is egg-shaped, measuring 6.5 by 7.7 feet. From the basin built around the spring the water flows under the Almendares River through two cast-iron pipes in a masonry tunnel and then enters the aqueduct. The aqueduct is about 10,389 yards long, has 24 inspecting towers, and is carefully protected from surface drainage and from overflow of the Almendares River. A macadam road runs along the aqueduct from Vento spring to Palatino.

There are two distributing reservoirs at Palatino of 8,000,000 gallons capacity each. The surface of the reservoirs is 116 feet above sea level. The reservoirs are not covered. The water is supplied to the city by gravity through a 42-inch cast-iron pipe and also a 20-inch cast-iron pipe which belonged to the old aqueduct.

In the grounds of Palatino there is a pumping station to supply Guanabacoa, Cojímar, Jesús del Monte, Arroyo Apolo, La Vibora, Príncipe Hill, part of Vedado, Camp Columbia, and Marianao.

Guanabacoa is supplied by a 12-inch pipe, 9,011 yards long, and a covered concrete reservoir with a capacity of 500,000 gallons, situated on Loma la Cruz at the western edge of Guanabacoa; the surface of the water is 242 feet above sea level.

Cojímar is supplied from an elevated concrete tank, situated on a hill about 2 miles due north of Loma la Cruz. This tank receives its water by gravity from the reservoir on Loma la Cruz.

Jesús del Monte, Arroyo Apollo, and La Vibora are supplied by an 8-inch pipe 1,038 yards long, and an uncovered concrete reservoir containing 320,000 gallons, situated on the Loma de Mazo. Elevation of tank, 259 feet above sea level.

Príncipe Hill and Vedado (upper part) are supplied by a 6-inch pipe 5,358 yards long. These places are supplied by direct pumping through distributing pipes with two small towers at Hospital No. 1 to balance the pressure. These towers can hold 50,000 gallons each. Their bottom is 141 feet above sea level. Two elevated concrete tanks, holding about 50,000 gallons each, have recently been installed at Príncipe fortress to supply this district; elevation 183 feet.

Puentes Grandes is supplied from a circular, covered, concrete reservoir which was recently built on the Loma de Matos, near eastern limits of Puentes Grandes; capacity, about 100,000 gallons; elevation, 183 feet.

Camp Columbia and Marianao are supplied from two elevated concrete tanks situated at Buena Vista. These tanks receive water through a force main 6 inches in diameter and 3,827 yards long.

Casa Blanca, Triscornia, Fort Cabaña, Morro Castle, Batteries Nos. 1, 2, 4, and the artillery camp in rear of Cabaña are supplied from a tank that is situated at Cabaña fort with an elevation of 137 feet. The tank is 19 feet 8 inches in diameter by 39 feet 4 inches high and receives water from the pumping station at the foot of Cabaña hill, to which it comes from the Havana supply by gravity, crossing the bay by a 6-inch pipe laid along the bottom.

The pumping station at Palatino contains one D'Auria pump, 8-inch discharge; one Dean duplex pump, 10-inch discharge; and two Worthington duplex pumps of 8-inch discharge and a boiler room with three 100 horsepower Worthington tubular boilers.

To supply all of the water necessary the D'Auria, Dean and one of the Worthington pumps have to work steadily at their full capacity. Two of the boilers are used at a time.

Another pumping station is being built at the same place, using gas engines and rotary pumps. This station will be used to supply all of the pumped water and the present station will be kept as a reserve.

There are being installed in the new pumping station two rotary pumps of 25,000 gallons each per minute against a pressure of 90 pounds, two gas motors of 220 horsepower each and a complete plant to generate the gas for the motors.

The Vento spring is protected by a large masonry blockhouse on the hill, about 100 yards distant. This blockhouse, however, would not withstand shell fire at all, and it is doubtful if it could withstand fire from high-power rifles for any length of time. If control of the spring and supply gates could not be gained, the entire supply from the spring could be shut off by cutting the aqueduct. Disabling the Palatino pumping station and the elevated distributing tanks by shell fire would interrupt the supply of the suburbs and higher portions of the city.

The Almendares River and the Zanja Real or Royal Ditch which leads out of it would give Havana sufficient water if the supply were cut off from the Vento spring, but the water would not be good and the city would be greatly inconvenienced.

SEWER SYSTEM AND LIGHTING.

The sewer system of Havana is very defective. The sewers that exist are of all sizes, styles, shapes, and depths. Many of them are simply the old surface drains converted into sewers and lying but a few feet under the surface. All of them are makeshifts that have been constructed from time to time by absolute necessity. Most of the houses have cesspools, and the overflow of these pools runs into the sewer or drain. All of the streets in the city as far west as Belascoain calzada have sewers and most of the built-up portions of town beyond that street have some sort of sewer or underground drain connections. These sewers all empty directly into the harbor of Havana and into the sea north of the city. A new system is being built (1908).

Havana has both gas and electricity, in addition to which a great number of private acetylene-gas plants have been installed. The latter system of lighting is very much used in Cuba. The Spanish-American Light and Power Company has plants as follows: Electric plant No. 1, with overhead current, at Tallapiedra Wharf; electric plant No. 2, with underground current, at Almendares River, Vedado;

gas plant No. 1, at Tallapiedra Wharf; gas plant No. 2, at gas reservoir, situated at corner of Eleventh and N streets, Vedado. The Guanabacoa Light and Power Company has an electric plant at Regla. The electric plants of the Havana Street Railway Company are at the corner of Colón and Blanco streets. The electric plants of the Havana Central Railroad Company are at Luyanó.

BARRACKS.

There is only one building of any size in the city of Havana that is now used as barracks. This is a government building occupied by the rural guard, situated at Dragones and Lealtad streets. It is a one-story building, except at one end, where the upper story is used as officers' quarters. The building is in the form of a square with a small center courtyard. It is constructed of rubble, with tile roof, and has accommodations for 100 men and 110 horses. The building is in good repair, has running city water, and modern closets and shower baths. The floor is of concrete, and in the stable part has a board superstructure on which the horses stand. The stable is so close to the sleeping rooms of the men that it is unsanitary, and the building should be used entirely for barracks or entirely as a stable. U. H. R. R. tracks pass in front of building.

The two small forts—La Punta, at the eastern end of the Malecón drive, and La Fuerza, at the Caballería Wharf—could be made to hold about 100 men each in case of necessity. These buildings are now used as offices and residences of the rural guard officials. The number of buildings that could be converted into barracks is very great, and they exist in practically all parts of the city. The best of these are probably the tobacco factories in the vicinity of the arsenal. The barracks, stables, etc., at Camp Columbia and at Cabaña are given separately under camp sites.

STABLES.

Public stables: Depot quartermaster stable at 128 Figueras street. The corral is situated about 5 squares west of the arsenal and was formerly occupied by a branch of the sanitary department. There are stalls for 320 animals, good bathing facilities for the men, ample sleeping quarters, a good dining room and kitchen facilities; parkage for about 150 wagons in the interior. There is also a small repair shop where old transportation is repaired.

A saddlery shop, hospital for sick animals, and a wheelwright and blacksmith shop are also established at the corral. Frame, with part tile and part paper roof; floor of concrete, with wooden superstructure. Many lumber yards in the vicinity could be converted into corrals.

Obras Públicas stables in the arsenal: Frame construction, open sides, tile roofs, concrete floors, with board superstructure. City water for watering animals and flushing stalls. Contains 456 double stalls, giving a capacity of 912 animals. This place contains a small hospital for animals and a cobblestone courtyard for 200 or 300 wagons. Buildings in a good state of repair.

Rural guard stable at Dragones and Lealtad streets; capacity 100 animals. (See barracks above.)

Rural guard stable at Cárcel and Zulueta streets; a large well-lighted masonry building; concrete floor, with a board superstructure in the stalls. Has large, airy rooms for attendants, and carriage space for 10 or 15 carriages; running water and sanitary plumbing; contains 32 single stalls. Building in good state of repair. Contains horses of the officers at rural guard headquarters. The whole building measures 45 by 245 feet.

Stables of the mounted police at Zulueta and Refugio streets; stable for 60 horses; city water connections for watering and flushing. Buildings not in good repair.

Private stables: Stable corner of Concha and Ensenada streets. Frame building, with tarred paper roof. Has stalls for 38 animals and pens for 100. Stalls have pine floors and pens have shavings. Has three rooms and a kitchen, for attendants. City water connections and zinc troughs.

Another stable adjoining above. Same construction. Contains pens for about 60 animals.

Another stable at 19 Atarés street, same construction as described above, has a capacity of 75 animals.

A stable at No. 1 Concha has a capacity of 50 animals. Construction same as described above.

At the warehouses of the U. H. R. R. at Regla there is a large warehouse for receiving cattle; contains pens with a capacity of about 2,000.

Stables of the guagua company "La Unión:" This company has been bought by the Havana Electric Street Railway Company, and the guaguas are run by the latter company.

Stable in Jesús del Monte, near the end of the car line; masonry building, tile roof, pine floor, feed boxes for 160 animals; not divided into stalls. Has a small blacksmith shop and space for 8 or 10 wagons. City water connections. Building in a bad state of repair.

Stable in Cerro, at Marquez, No. 1: Rented by La Unión Company from Venda de Estanillo. Frame building, very poor state of repair; tile roof, but very leaky; has feed boxes for 348 animals, but would not hold quite that many large American horses. Open space in vicinity for corrals, but is swampy.

This company also has stables at Concordia, 149; Príncipe, near the fort; San José, 128, and at Diaria, 44. These latter are somewhat smaller.

TRANSPORTATION CORRALS.

Ground suitable for corrals at Cabaña and Camp Columbia.

HOSPITALS.

Government hospitals: Nuestra Señora de las Mercedes, situated in the barrio of Príncipe between streets 21, 23, and J and L; capacity, 250 patients.

Número 1. Situated in the barrio of Príncipe, about 1 mile from the above; capacity, 500 patients.

Hospitals of a general character sustained by their own funds: San Lázaro, situated in La Marina street, corner of the calzada San Lázaro; capacity, 120. A leper hospital.

Hospitals of a private character: Paula, for women, situated on street of same name. Capacity, 100 patients.

Sanitariums: Nuestra Señora de Covadonga, situated in the Cerro on the calzada de Cerro.

La Benéfica, situated in the barrio of Jesús del Monte, Municipio street.

La Purísima Concepción, situated in the same barrio of Jesús del Monte and facing the calzada of Jesús del Monte and Alejandro Ramírez street.

La Internacional, situated in the calzada of Cristina.

San Rafael, situated on the corner of the calzada Cristina and Concha, facing the above.

Cuba, situated on calzada de la Infanta, No. 37.

In addition to these, there are a number of sanitariums belonging to societies.

QUARTERMASTER AND COMMISSARY STOREHOUSES.

1. The depot quartermaster occupied (in 1908) the new storehouse at the arsenal on the water front.

The wharf immediately in front of the storehouse is connected with it by a platform 330 feet long by 45 feet wide, with 23 feet of water around it.

A channel of 24 feet has been dredged to the wharf and transports can come to the dock.

The depot quartermaster storehouse proper contains 23,000 square feet of floor space.

The depot commissary and the medical supply depot occupied jointly a similar space, in a similar shed, connected with a platform on the water front.

The forage storehouse consists of two cement structures, with slate roof, at the west end of the arsenal. It has 600 feet by 400 feet of floor space, and is about 25 feet in height. One of these storehouses was ample for the supply of forage kept in the arsenal, and the other was used for a lumber shed and the storage of wheel transportation, such as crated ambulances, light spring wagons, etc.

Most of the forage for outlying posts was unloaded on lighters at a cost of $30 per day per lighter, and sent across the bay to Hacendados and Regla wharves, where it was loaded direct into the cars. This method saved double handling, besides being the most expeditious way of making these forage shipments.

2. San José docks and warehouses, situated on the bay front at the end of San Ignacio and Compostela streets. The three main buildings measure 508 by 203 feet, 508 by 164 feet, and 445 by 158 feet, respectively. Buildings are of mampostería, tile roofs, and wooden floors.

First building has two stories, narrow-gauge tracks, and elevators; no unloading platforms.

Second building, one story, tracks, but no platform.

Third building is very old; has a low roof; no tracks.

3. Havana Central dock; depth of water, from map of harbor, 27 to 30 feet; pier 190 by 380 feet.

Warehouse on pier has a steel frame, galvanized iron roof and sides; lighted by electricity so that night work can be done; tracks for standard-gauge trolley cars run through and around the warehouse; inside of building are fire plugs and reels of hose. Warehouse about 136 by 352 feet.

4. Warehouses and docks of the U. H. R. R. at Regla ferry landing. At this place there are 54 warehouses, each measuring 48 by 270 feet. These warehouses are in four buildings, masonry, tile roofs, 30-foot walls, containing 24, 8, 9, and 13 warehouses, respectively. The warehouses under the same roof have, as a rule, no partition walls between them, and several warehouses form one large room. Standard-gauge tracks for freight cars run along the back end of these buildings, but there are no facilities for loading and unloading supplies.

A pier runs out at the southern end of the row of warehouses, 408 by 48 feet. Three standard-gauge tracks run to the end of this pier and supplies can be unloaded directly from ships into the cars. On the pier there are two steam cranes running on tracks to unload heavy weights from ships on either side and one stationary steam crane. The floor of the pier is concrete, held up on heavy piles. Around the warehouses there are wide porches under which 2,500 men could be temporarily bivouacked.

Several of these warehouses have pens for receiving cattle; capacity, 2,000.

LOCATION OF IMPORTANT STATIONS AND OFFICES.

The United Railroads of Havana have two main stations, one the Villanueva station, corner of the Prado and Dragones street, and the other at Regla, across the bay, a ferryboat connecting it with Havana.

The Cristina station of the Western Railroad is at Cristina and Matadero streets, near Atarés Fortress.

The Concha station of the Marianao Railroad is on Carlos III, near Príncipe Fortress.

The station of the Havana Central Electric road is at the Arsenal, at south end of Zulueta street.

The post-office and telegraph office is at the Caballería Wharf on the Plaza de Armas; it has the following substations in Havana:

Letter:	
A	Aguiar 59.
B	Belascoain 14.
C	Salud 5.
D	Monte 138.
E	Muralla 15.
F	Seventh street, No. 93, Vedado.
G	Monte 412.
H	Jesús del Monte 240.
I	Hotel Pasaje; telegraph station also.
J	Obispo 37.
K	Hospital 6.
L	Someruelos 26.
M	Carlos III, No. 209.
N	San Ignacio 50.
O	San Pedro 26.
P	Neptuno 112.
R	Belascoain 74.
S	Seventeenth and C, Vedado.

The telephone central is at the market building, west end of Colón Park. The cable office is at the corner of Cuba and Obispo streets.

The ferries to Regla are at the Luz Pier at the end of Luz street.

ICE FACTORIES.

The Tropical ice factory, Infanta and Universidad streets; 30 tons daily. The Tropical brewery and ice factory, at Puentes Grandes; 90 tons daily. The Palatino brewery and ice factory, at Palatino Park in the Cerro district; 75 tons daily. La Habana, Infanta and Neptuno; 90 tons daily. La Competidora, Regla; 40 tons daily. Cubana, Cristina street, No. 17; 30 tons daily. Cristalizador, Pedrosa street, No. 2; not running; capacity, 10 tons daily.

CAMP SITES

There are numerous well-drained open spaces within a radius of 5 miles from the center of the city for temporary camps for large commands, convenient to calzada, rail transportation, and mains of Vento spring water. It is not necessary to give definite locations of such sites, as all immediate demands would be supplied by the available permanent and semipermanent posts in the vicinity of the city. To the east of the city are situated the fortresses of Morro and Cabaña and a semipermanent artillery post. In the rear of these there is unlimited open space for camping purposes on high ground which slopes toward the sea. To the west of the city is the semipermanent post Columbia Barracks (also known as Camp Columbia), in the vicinity of which an almost unlimited number of troops could be temporarily camped. Below are described the buildings pertaining to these fortresses and posts.

Cabaña: In the fort of Cabaña there are three buildings made to live in and divided into casemates, with doors and small windows at each end. In the largest of these there are 18 casemates, each one of which would hold comfortably 30 men, or 540 all told. The other two buildings are smaller, the casemates measuring 85 by 18 feet; but each casemate is divided into two rooms by a narrow hallway which runs through each building from end to end. One of these buildings has 7 casemates and the rooms are very dark. The other building has 15 casemates, but the rooms are ventilated and lighted by modern skylights through the roof. There are many other casemates and rooms that could be used as kitchens and storerooms, but should not be occupied by troops. Has city water and modern washrooms; rears and baths have been constructed sufficient for about 200 men.

Morro: One building constructed within Morro Fortress for living purposes, 146 by 146 feet, two stories high, 6 casemates in each story. These casemates are 18 feet wide and 140 feet long and would hold comfortably 50 men each. The lower casemates are very damp, and only the 6 in the upper story should be occupied by troops. Water connections, sanitary rears, etc., would have to be installed, as none exist. There are officers' quarters at one end of the building. There are many casemates that could be converted into kitchens and storerooms. Morro would hold comfortably 300 men and officers.

Artillery camp at Cabaña: Buildings are of the same style and construction as at Columbia. There are 8 barracks (one without kitchen) and 2 buildings, 21 by 162 feet, each having 11 small sets of quarters; a frame stable, open sides, for 60 animals; a small corral with wire fence; 2 small storehouses, 21 by 133 feet; running city water in camp. Buildings are all in a poor state of repair. The hospital is of frame construction; wide porches; capacity, 70 patients; has storerooms, kitchens, dispensary, operating room, etc. Has two small screened wards for fever patients; city water connections. Buildings in fair state of repair.

Columbia Barracks (Camp Columbia): A semipermanent post situated on high ground overlooking the sea, about 8 miles west of the business district of Havana. The post has a long rectangular parade ground, on the north side of which are situated the officers' quarters, and on the south side the barracks and stables. Buildings are frame, with tile and galvanized iron roofs; all have running water, sanitary rears, and shower baths. Buildings are old, but at present (1908) are in a good state of repair. The reservation covers 295 acres.

There are 24 barracks, each holding, when full, an organization of 125 men. Each set of barracks has a screened dining room and kitchen.

There are 12 double sets and 3 single sets of officers' quarters, and 4 buildings, each divided into 10 small sets of bachelor quarters.

There are 13 stables; frame, open sides, and paper roofs; each made for 75 animals, but can hold 100.

In addition to these there are quartermaster stables for 175 animals, a forage barn, and barrack for quartermaster employees.

The hospital as at present equipped has 108 beds and barracks for 110 hospital corps men, but the number of beds could be greatly increased by utilizing some of the buildings now used as barracks and by screening the large porches.

The quartermaster's storehouse measures 48 by 208 feet.

The commissary storehouse measures 48 by 208 feet.

These two buildings are frame, with tarred-paper roofs, and are at Quemados, about one-half mile from Camp Columbia; connected with the Marianao Railroad and the Havana electric lines; unloading platform on both sides.

FORTIFICATIONS.

A full report on the fortifications of Havana is on file in the Second Section, General Staff.

RAILROAD SIDINGS.

The railroad sidings are situated at the stations noted above. (For full descriptions see Railroad Files of Cuba in Second Section, General Staff.)

ROADS LEADING OUT OF HAVANA.

A macadam road runs east from Regla through Guanabacoa to Campo Florido. A road from Havana runs around the bay and joins this road at Guanabacoa.

A macadam road runs southeast, through San Francisco and San José, to Güines.

A macadam road runs south, through Calvario, Managua, and San Antonio de las Vegas, to the railroad station of Durán. This road is to be completed to Batabanó.

A macadam road runs south through Santiago de las Vegas, Bejucal, and Salud, to Quivicán. A branch from this road runs southwest, through San Antonio de los Baños, to Güira de Melena.

A macadam road runs from the Palatino pumping station, through the Vento Springs and Wajay, to Arroyo Arenas.

A macadam road runs southwest, through Marianao and Guanajay, to Mariel and Cabañas.

LINE OF APPROACH.

Best line of approach for attack would be from the southeast, using the Güines-Havana calzada and the Havana Central Railroad as lines of communication. (See detailed description of environs of Havana.)

THE ENVIRONS OF HAVANA.

General.

Havana is a city surrounded on three sides, the east, south, and west, by a series of hills between which lie cultivated valleys. To the north lies the sea. The hills in general are in the form of ridges which extend from the higher land of the interior toward the city, gradually decreasing in elevation and ending in more or less abrupt buttes, which command the city, those to the east and southeast at a comparatively short range and those to the south and west at a longer range. These ridges, especially those to the southeast and south are in general broken up by knobs or higher points, which increase in elevation as the ridge recedes from the city, each knob in turn commanding a view of the city and of the lower points along the ridge. These, with the exception of the Morro-Cojímar ridge, are half-open pasture lands, cut up by stone walls, wire fences, hedges of cactus, and stone quarries. The ground is usually a hard limestone formation, covered by a thin coating of sandy loam, and, except for the artificial obstruction, such as wire and stone fences, cactus hedges, and stone quarries is practicable for artillery and cavalry.

The valleys lying between these ridges are more cultivated, and many of them contain towns, villages, or groups of farm buildings. The lower ground is also cut up by wire and stone fences, cactus hedges, and stone quarries, is inclined to be marshy along the streams, and would be extremely difficult for cavalry and artillery during the rainy season. There are but few lines of communication between the ridges, and most of the few that exist are of doubtful value. All roads lead to Havana, and some of the suburbs built along these roads are only a mile or two apart, but they usually have no means of cross communication.

The following are the principal ridges. Their distances from the center of the town increase in the order named, beginning on the east and extending in a semicircle around to the sea on the west.

1. The ridge extending from the Morro and Cabaña to Cojímar, and beyond the river of Cojímar, which cuts the ridge about 3 miles from the city of Havana.

2. The ridge extending from Regla to Guanabacoa and reaching its highest point at the hill of La Cruz, upon which the Guanabacoa water tanks are placed.

3. The ridge extending from the bridge at Luyanó to San Miguel.

4. The ridge beginning in Jesús del Monte and running south through the Loma de Luz, the Loma de Mazo and Víbora, and from there extending in a southwesterly direction.

5. The plateau on which are situated Puentes Grandes, Quemados, Camp Columbia, and Marianao. This plateau is by far the greatest in area of all the ridges. Its military crest extends for almost 2 miles along the west bank of the Almendares River.

Besides these five ridges there is a long, irregular ridge lying east of the Almendares River. It begins at the Loma de Matos, near Mordazo, extends in a general northerly and northeasterly direction through the cemetery of Colón and the Castillo del Príncipe, and ends near the beach at the Santa Clara battery.

Between the ridges 1 and 2 lies a generally cultivated valley which becomes marshy as it approaches the bay. and through the western side of which runs the Regla-Guanabacoa railroad. Between ridges 2 and 3 lies the cultivated valley of the Martin Pérez River, through which runs the United Railroads of Havana. Between the ridges 3 and 4 is the narrow valley of the Luyanó River, the village of Luyanó, and a part of Jesús del Monte. The broad stretch of land between ridges 4 and 5 is the valley of the Almendares River, which runs at the western side of the valley among the hills. Through this valley runs the Western Railway, the Zanja Real, and the aqueduct which carries the Havana water supply. To the north and northwest of the fifth ridge is a long, gentle slope to the sea. This slope is being cut up into streets and sold in small lots for building purposes. It is to become a residence district. To the northwest of the Loma de Matos-Príncipe ridge, and lying between it and the sea, is the residence district of Vedado. To the east of this ridge is a part of Havana proper, and, farther south, the barrios of El Cerro and Palatino and the small village of Mordazo.

Detailed study of the environs.

1. The ridge from Morro to Cojímar is low, regular in form, and covered almost its entire length with a thick growth of brush. The surface is a limestone rock, covered with a thin coating of sandy loam. This ridge commands the city in its entire length, but it is so close that it would probably not be used in an attack on or a defense of the city because

an attacking force must have gained a sufficient advantage over a defending force, before it could arrive at this ridge, to have caused a surrender. The ridge continues east of the Cojímar River and here constitutes one of the most important hills in the environs of Havana. The hill of Buenavista (also known as San Pedro, and the Loma de Cojímar) juts out into the valley from this ridge and commands a view of all Havana, Morro, Cabaña, Regla, Cojímar, Guanabacoa, and the hill of La Cruz. It commands the valley between itself and Guanabacoa for several miles back from the bay. It is skirted on three sides by the Cojímar River, and the slope on these three sides is so steep and so rough that it is impracticable for horses. The reverse, or eastern, slope is quite gradual and could be easily ascended if a road were cut through the brush. The surface of the hill is the usual limestone formation, covered in places with a sandy loam. It is covered with a dense growth of brush which would have to be cleared in order to get horses through. This hill was fortified in 1898 and the remains of the earthworks are still there. The estimated height of this hill is 250 feet. The range from this hill to the Havana wharves on the western side of the bay is about 6,000 yards.

The lines of communication for this ridge are:

(*a*) A road running from between Morro and Cabaña to Cojímar by the seashore. This is an unimproved road passing close to the beach. It is sandy in places, but has a rock foundation and would be practicable for cavalry, artillery, and automobiles at all seasons of the year. It is wide enough for one wagon only, has no appreciable grades except at Cabaña, and is concealed almost its entire distance from Cojímar to Battery No. 1 by a thick brush on both sides which is about 10 feet high. At Cojímar this road joins the Cojímar-Guanabacoa-Havana calzada.

(*b*) The Cojímar-Guanabacoa calzada. A good macadam road, which is level in the valley, but has moderate grades over the Cojímar ridge at one end and rises to the level of the town of Guanabacoa at the other. This road ends at Cojímar.

(*c*) A road, running over private property, which leaves the above-mentioned calzada near the foot of the Buenavista hill, crosses the river over a wooden bridge, and, running in an easterly direction, gradually ascends to the top of the hill. This is a good improved road with moderate grades and practicable for all kinds of wheeled transportation at all seasons. Is wide enough for only one wagon.

Between the Morro-Cojímar ridge and hills of Guanabacoa lies a partly cultivated half open valley about one mile in width, which is drained in part by the Cojímar River and in part by the Bay of Havana. This valley becomes marshy as it approaches the bay. It is crossed by the Guanabacoa-Cojímar calzada and through the center of it runs an abandoned railroad, which was built during the first intervention for the purpose of carrying supplies to Triscornia. Through the southern part of this valley runs the Regla-Guanabacoa Railroad.

2. The ridge running from Regla to Guanabacoa is broken into a number of small ridges and hills as it ascends to the latter place. This ridge reaches its highest point at the Loma de la Cruz (also called the Loma de Guanabacoa, the Loma del Indio) and another hill about one-fourth mile west, upon which is a small wooden blockhouse, constructed in 1906. These two hills command a view of all of Havana proper, Morro, Cabaña, El Príncipe, and Atarés. They also command the town of Guanabacoa, which lies on the western slope of these two hills, and the valleys on the east and west for several miles from the bay. The Loma de la Cruz has two concrete water tanks with an estimated capacity of one million gallons. The crest of this hill is not more than 150 yards square, but on both sides are benches which would afford good artillery positions. The remains of Spanish earthworks, constructed in 1898, are noticeable, but are of no practical value. The slope to the east of this hill is quite gradual. The slopes to the south and west are steeper, but are practicable for cavalry and light artillery. This hill has an elevation of 248 feet, and its distance from the wharves on the Havana side of the bay is about 4,000 yards.

The hill referred to as being one-fourth mile west of La Cruz hill is more limited in area on top and is much cut up by an old stone quarry. Its southern and eastern slopes are gradual, but the slopes to the west and north are very steep and are cut by the Guanabacoa-Luyanó calzada. This hill has an elevation of about 245 feet, and the range to Havana is slightly greater than that of the Loma de La Cruz. The crest of the whole ridge is open, but its sides become half open, more cultivated, and more cut up by fences and hedges as they descend into the valleys.

The lines of communication of this ridge are:

(*a*) The Regla-Guanabacoa calzada, a fine macadam road with moderate grades, which ascends steadily from Regla to Guanabacoa.

(*b*) The Cojímar-Guanabacoa calzada, described above.

(*c*) The Guanabacoa-Luyanó calzada, a good macadam road, which joins the calzada of Jesús del Monte west of Luyanó. This road passes between the two hills described above, has moderate grades, and crosses two bridges—a steel one over the Martín Pérez River and a stone one over the river of Luyanó. Both these bridges carry the water pipes for the Guanabacoa tanks.

(*d*) The Guanabacoa-San Miguel road, unimproved and scarcely more than a trail. Would be very difficult for horses and wagons except in the dry season.

(*e*) The Guanabacoa-Regla electric line.

(*f*) The Guanabacoa-Bacuranao calzada, which runs east from Guanabacoa.

Between the Guanabacoa hills and the Luyanó-San Miguel ridge is a cultivated valley about a mile in width through which runs the river of Martín Pérez and the United Railroads of Havana. Crossing this valley are the Guanabacoa-Luyanó calzada and the Guanabacoa-San Miguel road described above.

3. The Luyanó-San Miguel ridge is a long, broad, and rather low-lying hill which gradually descends from the higher land inland until it ends in a point opposite Luyanó, upon which point is a small wooden blockhouse built in 1906. The highest point of the ridge is about 1 mile east of the blockhouse. The ridge as it ascends to this elevated point from the blockhouse is broken into a number of elevated points, each commanding a view of the city and of the other points lower down on the ridge. The highest point referred to has the remains of some old Spanish earthworks, as have also some of the points lower down on the ridge.

This ridge commands the valleys on either side of it and the elevated points command a view of Havana, Morro, and

Cabaña. The topography is such that it would lend itself admirably to the use of indirect fire of artillery, as there are a number of knobs behind which the artillery could be placed. The surface of the ground is the usual limestone formation partly covered with a sandy loam. It is half-open pasture land, becoming more cultivated as the sides descend into the valleys. It is much cut up with wire and stone fences, cactus hedges, and stone quarries. The average width of the ridge is 400 yards, and the range of the highest point mentioned above is about 4,700 yards to Atarés, and some 6,000 yards to Central Park.

The lowest point, on which stands the blockhouse, is about 1 mile nearer to the city places named.

About 2 miles inland from the highest point are a number of higher hills which overlook this position.

The lines of communication of this ridge are:

(*a*) The Guanabacoa-Luyanó calzada, described above.

(*b*) The Guanabacoa-San Miguel road, described above.

(*c*) The Luyanó-San Francisco de Paula calzada, a macadam road which runs close to the ridge to the southwest of it.

(*d*) Three short, unimproved roads, which extend from the calzada of Luyanó-San Francisco to the top of the ridge. These roads are rough, but are practicable for cavalry and artillery at any season of the year.

(*e*) The Luyanó-San Miguel road: This road is very rough in places and muddy in others. It is unimproved and would be difficult for horses or wagons at any season of the year. The portion of it between Jacomino and Luyanó would be impassable for horses in the rainy season.

The valley to the south and southwest of this ridge is narrow, about half a mile in width, and it is generally cultivated. Through it runs the Luyanó River and, for a short distance, the Guanajay Electric Railroad.

4. The line of hills extending south and southwest from Jesús del Monte contains five clearly defined "lomas," which command good views of Havana and its suburbs at comparatively short range. These are so placed as to make two parallel lines running east and west. In the line nearest Havana are the Loma de Luz, on the west, and the two Lomas de Timón (Cantares) on the east. About 1,200 yards

south of these and rising above and commanding them are the Loma de Mazo on the west and the Loma de la O (also called Lejanito) on the east.

The Loma de Luz commands all of the town of Havana, except Vedado, which is concealed by the Príncipe ridge. It commands a view of Morro, Cabaña, Regla, the Palatino waterworks, and all of the valley between Jesús del Monte and Palatino, except a few disconnected folds in the ground.

The two Lomas de Timón are about a half a mile east of Loma de Luz. One of them is crowned by a wooden blockhouse, built in 1906, and the other one on its eastern side has been quarried out almost to its center. These two hills give about the same view as the Loma de Luz, except that they command the valley of the Luyanó River and the Luyanó-San Miguel ridge to the east instead of the valley toward Palatino. The height of these hills is estimated at 220 feet above sea level. They are about 2,500 yards from Atarés, and about 5,200 yards from Central Park. On the northern slope of these hills and partly between them is the suburb of Jesús del Monte.

The Loma de Mazo (the Key Hill), as its name implies, is one of the most important hills surrounding Havana. It lies about 1,200 yards south of the Loma de Luz, and its summit is 300 yards west of the village of Víbora, which is the end of the Jesús del Monte car line, and at which point are situated the car barns. The Loma de Mazo gives a clear view seaward and signals with ships could be exchanged. It commands the three hills mentioned above, all of the bay, Regla, and Havana and its suburbs except Vedado. It gives a view of Morro, Cabaña, El Príncipe, and Atarés. It commands the valley of the Almendares for some distance inland, and gives a view of the Western Railway for 2 or 3 miles.

The Loma de Mazo is about 800 feet long, running east and west. Its highest point is about 300 yards from the calzada, which cuts its eastern flank where the slope is steepest. The slope northward, which overlooks Havana, is next in steepness, but not too steep for wagons. To the south and southeast the slope is gentle. Toward the west the hill runs into a long ridge and disappears in low ground along the line of the Western Railway. The southwestern corner of the crest has a wooden blockhouse, built in 1906, and the ground is much cut up by an old Spanish earthwork, built in 1898. The highest point on the hill is occupied by a concrete water tank, which has an estimated capacity of 300,000 gallons. This is supplied from the Palatino waterworks. About 1½ or 2 miles south by southeast lie a series of hills which command a view of this position.

The Loma de Mazo has an elevation of 261 feet, and it is about 3,700 yards from Atarés and 6,400 yards from Central Park.

The Loma de la O rises about 1,000 yards east of the Loma de Mazo. It is a ridge about 700 yards long, and it is made up of three elevated points, on each of which are the old 1898 Spanish earthworks. This hill commands a view of the principal points in and around Havana; small portions of the town are concealed by the Lomas de Luz and Timón, but there is no part of the town that can not be seen from some part of this hill. The slope to the north and northeast is gradual, rolling, and cultivated. The electric-car barns at Luyanó can be seen from this hill, and also a portion of the lower valley of the Luyanó River. The southern slope of this hill is steep, is inclined to be marshy at the foot, and would be difficult for artillery. A small creek runs at the foot of the southern slope, turns the eastern flank of the hill, and empties into the Luyanó River. Along this creek runs the Guanajay Electric Railroad, which is visible both to the east and south. To the south of the Loma de la O the country is rolling and hilly. At a distance of about 2 miles the ground rises to an equal or greater height, forming hills which overlook this hill and the city of Havana. The low country in the vicinity is well cultivated and much broken up by fences, hedges, and groups of trees, but the hills are mostly open pasture lands. The Loma de la O has been staked off into streets and lots, and it is evidently the intention to sell this land for building purposes.

About 1,200 yards to the east of the Loma de la O and on the opposite side of the creek, along which runs the Guanajay Electric Railroad, is a high isolated hill, called La Capitana, very much cut up with Spanish earthworks. This hill commands a view both up and down the valley of the Luyanó, and also of Havana. Running to the southwest from this hill is a lower ridge with three elevated knobs. This ridge lies almost parallel to the Loma de la O, about 1,000 yards from it, and limits the view to the southeast from the latter hill.

Still farther east and slightly northeast of La Capitana is an isolated ridge which is covered with Spanish earthworks. This ridge is about 500 yards long at the crest, extends in a northwesterly and southeasterly direction, commands the eastern part of the valley of the Luyanó, and has about the same view of Havana as La Capitana. It is about 1,000 yards or more from the latter hill.

The lines of communication of the Jesús del Monte ridge are:

(*a*) The calzada of Jesús del Monte from Havana, along which the electric street cars run as far as Víbora.

(*b*) The Guanajay Electric Railroad, which runs through Luyanó and crosses the ridge a short distance south of Víbora.

(*c*) The Havana-Bejucal calzada, which runs south from the Jesús del Monte calzada. This is a good macadam road.

(*d*) A macadam street is being constructed from the Palatino waterworks to Jesús del Monte. This will pass between the Loma de Luz and the Loma de Mazo (1907).

The broad valley of the Almendares, between ridges 4 and 5, is rolling, cultivated, and much cut up by fences of wire and stone, hedges, and small streams. It is inclined to be marshy in many places and has no means of cross communication. In order to cross this valley in the vicinity of Havana it is necessary to go into the city to reach the calzadas which run from there to these ridges. Through this valley run the Almendares River, the Zanja Real, the aqueduct carrying the water for Havana, the Western Railway, and the Villaneuva Division of the United Railroads of Havana.

5. On the northeast corner of the plateau, upon which are situated Marianao, Quemados, Camp Columbia, and Puentes Grandes, is a hill called La Loma de San Ignacio, which still shows the remains of old Spanish earthworks. From this hill can be seen practically all Havana, Príncipe, Morro, Cabaña, Atarés, Puentes Grandes, and the Palatino waterworks. It overlooks and commands the valley of the Almen-

dares for several miles inland from Puentes Grandes. The crest of this hill is about 250 yards long. Its northern slope is too steep and rough for horses; its southern slope is gentle and cultivated. About half a mile south of San Ignacio Hill is another hill of about the same form and size, and about the same elevation, which is connected with it by a saddle. To the northwest of the San Ignacio Hill the crest of the plateau is cut by a dry arroyo; beyond this arroyo is a small ridge, very much cut up by stone quarries and near which are situated a number of brickyards. To the northwest of this ridge is a small swampy stream, which here divides the plateau by a deep but narrow valley. Over the mouth of this valley the Marianao Railroad runs on a high fill. On the high ground northwest of this valley is the village of Puentes Grandes. From Puentes Grandes the crest of the plateau follows the river bank quite closely almost to its mouth. At a place about half a mile north of Puentes Grandes are some old Spanish earthworks, built in 1898, which to the west command a view of a portion of Camp Columbia and the slope from Camp Columbia to the sea. To the east these works command a view of the cemetery, El Príncipe, and the eastern portion of Havana, seen over the cemetery ridge. To the north of these works a large butte sticks out to the east, causing the river to make a sharp turn eastward to get around it. This butte is cultivated on top, but its sides are wooded and toward the river are very steep. This hill gives a closer view of the cemetery ridge and of Príncipe, but due to its isolated position and its difficulty of access it is of no value from a military point of view. The Almendares here runs through a deep gorge with steep wooded banks, caused by this butte on one side and the cemetery ridge on the other. The crest of the plateau gradually lowers and ends near the angle made by the Almendares River and the sea.

The plateau extends to the southwest of the crest described. It is about the same elevation as the crest, and the country is slightly rolling, half open, cultivated ground. On this plateau are situated Marianao, Quemados, and Camp Columbia.

The lines of communication of this plateau are:

(*a*) The Ceiba road, which is macadamized, runs through Marianao, Quemados, Puentes Grandes, and joins the Cerro calzada.

(*b*) The macadam road leading from Camp Columbia to the cemetery of Colón, and there connecting with two streets, one leading to Vedado, and the other to El Príncipe, and there connecting with the street system of the city. This road crosses the Almendares River on a floating bridge; at this point the grades are steep, but are practicable for loaded wagons and automobiles. (Reinforced concrete bridge, 800 feet long, in process of construction, 1908.) In other places on this road the grades are moderate.

(*c*) The Vedado-Marianao electric car line, which runs from Vedado past Camp Columbia to Marianao.

(*d*) The Marianao Railroad, which starts at Havana and runs through Puentes Grandes and Marianao, skirting Camp Columbia on the way.

Arroyo Apolo.—Barrio and village. The village is built along the Havana-Bejucal calzada about 3.1 miles from Havana and contains 5 or 6 stores and about 20 houses.

Arroyo Naranjo.—Barrio and village. Contains the village of the same name and the sitio of San Juan. The village is on a ridge on the Havana-Bejucal calzada, where the Western Railway of Havana crosses it about 6.2 miles from Havana. It is built along the calzada and has a small station but no side tracks. Population about 300. There is a brickyard which would shelter one battalion, if necessary. Water is pumped to the village from Calabazar, 1¼ miles distant, and is distributed by means of a tank and pipes.

San Juan.—Sitio. On the Havana-Bejucal calzada about 4⅜ miles from Havana. Contains a store and 4 or 5 houses.

Calvario.—Barrio and village. The barrio contains, besides the village of Calvario, the villages of Chorrera and Mantilla.

The village is on the top of a high hill on the Havana-Managua calzada, 5.6 miles from Havana, and has about 250 inhabitants. Water supply obtained from 5 or 6 wells, but these wells run dry and water has to be hauled in public wagons from Jesús del Monte. A road branches east to San Francisco and one west to Arroyo Naranjo. No telegraphic communication.

Chorrera.—Village. Situated 7.4 miles from Havana, on the Havana-Managua calzada. Consists of 6 or 8 houses and a store. Water obtained from 4 or 5 wells; said to be good; is abundant. No telegraphic communication.

Mantilla.—Village. Consists of 6 or 8 houses along the Havana-Managua-San Antonio-Durán calzada, 4.3 miles from Havana, and situated on the top of a ridge which gives a good view north, toward Havana. Water supply obtained from wells, but in 1906 they went dry and water was hauled from Jesús del Monte in Obras Públicas water wagons.

Casa Blanca.—Barrio and village. A coal-receiving station situated across the bay from Havana. Part of the city.

Luyanó.—Barrio and town. The town, of about 200 houses, nearly all of cement, is situated south of the most southern point of Havana Bay, on a calzada running east from Jesús del Monte to Guanabacoa. The eastern limit of the village may be considered as the Río Martín Pérez, though new houses are now being constructed east of this river.

The importance of this place is due to the fact that from here radiate 5 calzadas, running in all directions, and here the Havana Central and the United Railroads of Havana have stations and a large amount of siding, and the cars of the Western Railroad can also be run to these stations. The proximity to the warehouses and wharves of Havana render the place a center of commerce. When Havana was prepared for defense by the Spanish in 1898, Luyanó was the headquarters of a brigade and the location of the reserve. The population is estimated to be about 1,400. Water is obtained from the Havana supply, Vento springs. The supply runs along the Guanabacoa calzada on the south side of the road. The supply for Regla runs 100 yards north of the calzada and can be cut here. There is no sewer system, and acetylene gas is used for lighting. In addition to the Vento water there are many wells and cisterns. The Martín Pérez and Luyanó rivers and Arroyo Pastrana, all of which are in the limits of the village, are salty, but animals will drink from them.

Two buildings are especially suitable for barracks; the police station and the Quinta de la Asunción (Quinta de los Jesuitos). The first is on the south side of the Guanabacoa calzada, 100 yards west of the Puente de Alcoy, spanning the Río Luyanó. It has one story; built of cement; Vento water; modern closets; has wall lockers for 25 men. It would quarter 50 infantry soldiers and has a stable for 12 horses.

The Quinta de la Asunción, property of Belén College, Havana, is on the Jesús del Monte-Guanabacoa calzada, on the south side of the road, 200 yards west of where the Calzada de Concha comes in from Havana. It is in the center of a wooded field, on a hill about 50 feet high. It has two stories; is of cement; Vento water, also a well and cistern; acetylene gas; modern closets; would quarter 200 infantry. The grounds are well drained by Arroyo Pastrana.

The Havana Central Railroad has along the south side of the calzada and north of their repair shops a stable for 200 animals. The United Railroads of Havana has a large corral, suitable for 500 animals. This is situated northwest of town. There are a large number of corrals and stables pertaining to Havana within easy reach of Luyanó. There are also many cattle chutes and ramps. Practically all the stock that comes to Havana is unloaded here.

There is no hospital, but the Quinta referred to would make an excellent one. The post-office is alongside of the police station, already described. The railroad stations of the Havana Central and United Railroads of Havana are within 200 yards of where the Concha calzada enters the Guanabacoa road, but the chief traffic is carried on, not at the stations, but at the corrals. The Havana Central has a telephone at the station, and the Havana "Red" has a station at the police station connecting with Havana. The United Railroads of Havana has telegraph connection at the railroad station.

There is no ice machine.

The town is surrounded by a line of low hills, not over 50 feet high. The depression in which it is situated is well drained by the streams above mentioned. The land within this depression is half open pasture, not suitable for the camp of a large body, but a regiment could find a camp site. The hills were fortified by the Spanish in 1898 and formed a portion of the third line of defense of Havana. They are not wooded.

Roads: A calzada east to Guanabacoa; one southeast to Güines; one south to Batabanó; one north to Havana (de

Concha); one west to Jesús del Monte. About 200 yards south of Luyanó are the Havana Central Railroad machine shops, and there is much available siding.

An approach upon this place embraces the problem of approaching the city of Havana itself.

Puentes Grandes.—Barrio and village. The village is about 4 miles from the business part of Havana, on the Havana-Cerro-Marianao calzada, at the point where it crosses the Almendares River. Contains a paper factory and several brickyards.

Regla.—Town. Situated on the east side of Havana Bay. Divided into four barrios, viz: Primero, Segundo, Tercero, and Cuarto de Regla. Contains large warehouses and wharves. It is the terminus of the Matanzas branch of the United Railroads of Havana and a shipping point for supplies going to or coming from the interior of the island. It is a part of the city of Havana and is connected therewith by two ferries, each one making the trip each way every twenty minutes.

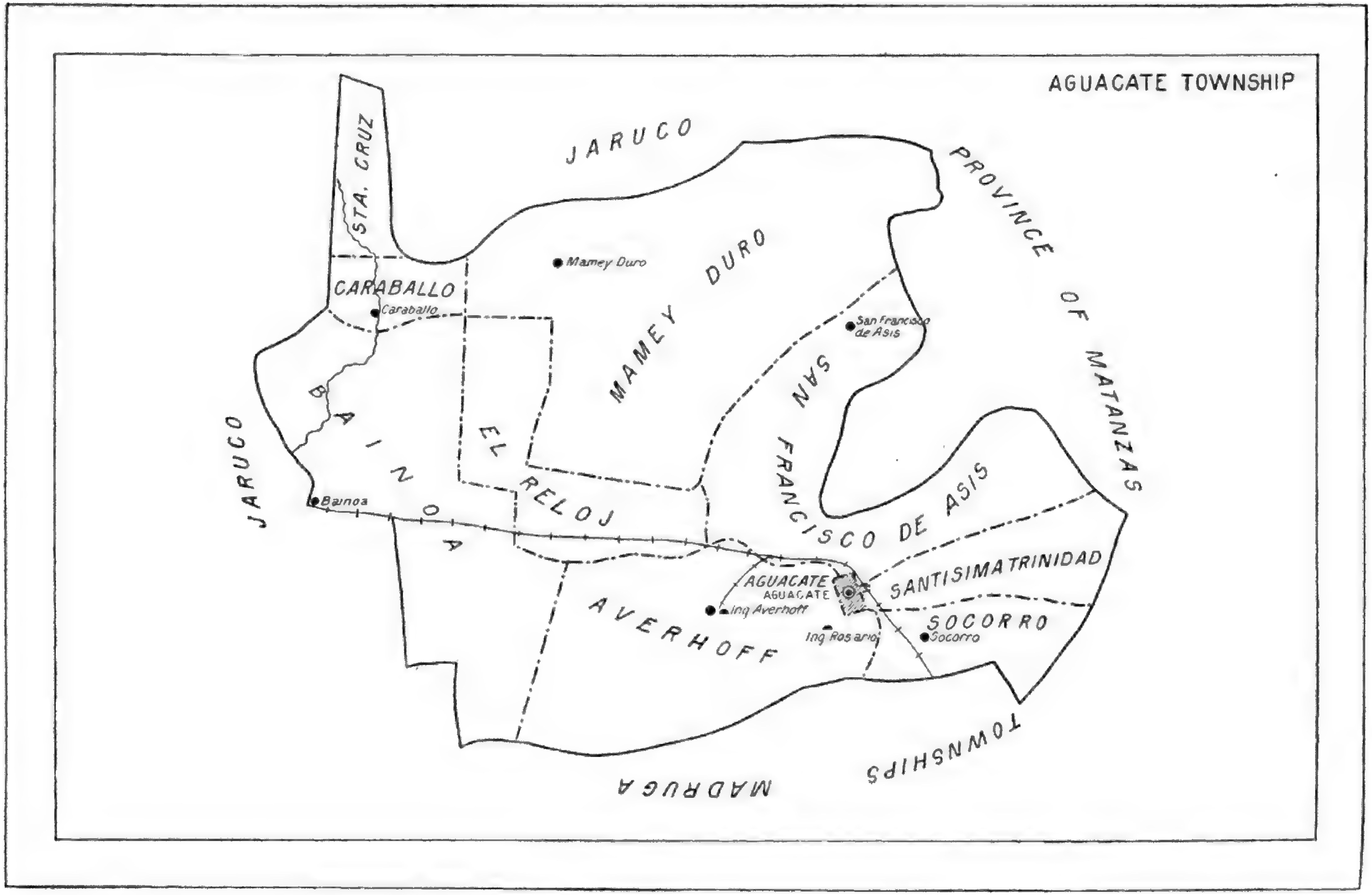
JUDICIAL DISTRICT OF JARUCO.

Township:	Population.
Aguacate	7,305
Jaruco	12,067
San José de las Lajas	11,988

TOWNSHIP OF AGUACATE (CAPITAL, AGUACATE).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Aguacate	Aguacate	Urban		2,027
Averhoff	Averhoff	Rural	1.8	936
Bainoa	Bainoa	do	8	527
Caraballo	Caraballo	do	10	730
Mamey Duro	Mamey Duro	do	8	845
	Reloj (El)	do	4	625
San Francisco de Asís	San Francisco de Asís	do	3.7	1,032
	Santa Cruz	do	9.5	228
	Santísima Trinidad	do	2	193
Finca El Socorro	Socorro	do	1.2	162

Aguacate.—Barrio and town. The town has 1,109 inhabitants, with probably about 200 houses all told. Houses are of stone and wood with tile roofs. Situated about 35½ miles by railroad east of Havana and about 6 miles by road northeast of Madruga.



AGUACATE TOWNSHIP

Water supply is obtained from a well on calle Real, 50 yards north of the church. This well is about 60 feet deep to water and has about 40 feet of water, with a constant flow; is the property of the city, and has a small steel tank which is kept full by means of a small steam pump. The railroad depot has a water tank supplied from a well by means of a steam pump, and at the southwest edge of town there is a large tank and steam pump from which the sugar mill Rosario obtains its water supply.

There are several stores near the railroad station that could be used as barracks; all small, one-story buildings, and none of them particularly adapted for military use.

There is a two-story house (hotel) opposite the railroad depot that would make an excellent base hospital. It is a large, new building and used as a store. It has a roofed-over courtyard, with a glass wall on the western side. Capacity of the upper story probably about 50 beds.

There is a large railroad warehouse about 100 yards from the passenger depot that could be used as a quartermaster and commissary storehouse. Near this building is the Spanish Club that could be converted into a storehouse or could be used as offices or as officers' quarters.

On the corner of calle Real and the calzada that leads to the sugar mill is a small building, back of which is a walled inclosure that could easily be made into a quartermaster corral for 150 or 200 animals; water to be obtained from the city well or from the well at the railroad depot.

The best place for a camp is at the ingenio Rosario, which is about one-half mile west of the town. The ingenio is surrounded by earthworks, which inclose a space about 250 yards square. At intervals along these works are small blockhouses that would hold about 4 men. The sugar mill and the surrounding buildings could shelter about one full regiment and two more could be placed in the inclosure if necessary. The country surrounding this place is flat, and if the sugar cane were cut down it would be a strong position. The water supply is pumped from a well on the southwest edge of the town, probably a little over one-half mile from the ingenio. The ingenio contains many tanks wherein water for an indefinite period could be stored. A switch runs to the mill from the U. H. R. R. tracks at Aguacate.

Post-office and telegraph office are on calle Libertad, one block east of the station of the railroad.

The railroad station on the U. H. R. R. is a small, new building near the center of the eastern edge of town.

The town is surrounded by a series of earthworks built by the Spaniards in 1898. They are still plainly traceable, but are of little military importance.

Averhoff.—Barrio and village. A rural district lying south and west of Aguacate. It contains the ingenios Averhoff and Rosario. The village of Averhoff is made up of the buildings pertaining to the sugar mill Averhoff and the homes of the workmen.

Bainoa.—Barrio and village. The village is a small, unimportant one with 20 or 25 houses and is situated 9 miles by road northwest of Aguacate. The railroad depot of the U. H. R. R. is of stone; about 30 by 70 feet. All houses are one-story, with tile roofs. The water supply is obtained from a deep well that is near the depot. It is said to have a constant flow. The ground around Bainoa is all low and cultivated and there is not much choice of camping ground except that it should be near the well.

Caraballo.—Barrio and village. The village is situated 11 miles by road northwest of Aguacate and consists of 62 houses and 2 stores; is built in a flat, level country, planted in sugar cane. Houses in center of village are masonry, with tile roofs. Water supply is obtained from wells; water is said to be good and abundant. Village is connected with the 43-kilometer station of Matanzas branch of the United Railroads of Havana by the narrow gauge railroad of the Carmen and Lotería ingenios.

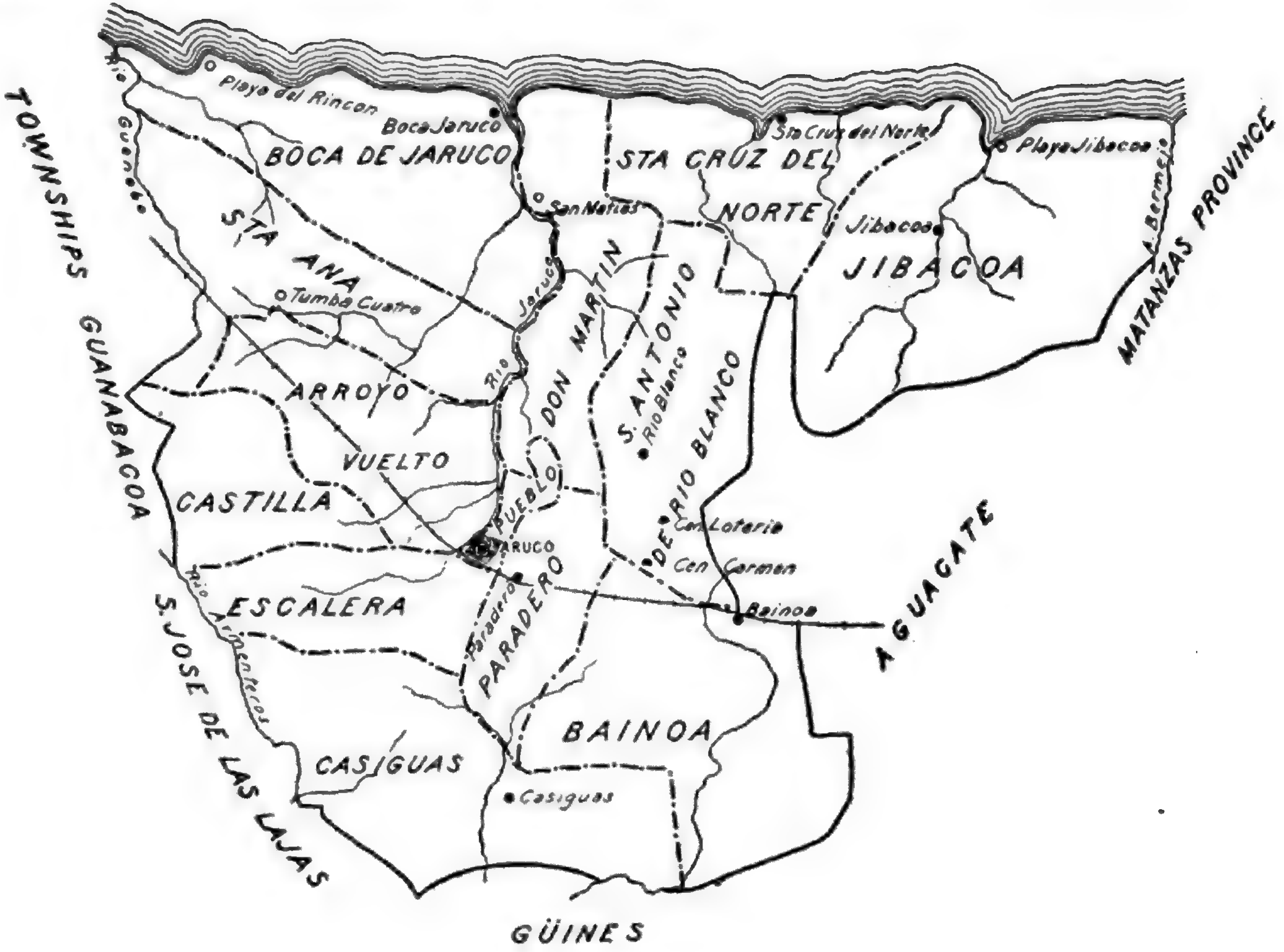
Mamey Duro.—Barrio and sitio. Point of this name consists of 3 houses and 2 stores, widely separated. District contains 86 farms.

Reloj.—Barrio. No point of this name. District contains 43 farms.

San Francisco de Asís.—Barrio and sitio. Point of this name is a store. District contains 28 farms.

Santa Cruz.—Barrio. No point of this name. The district contains 42 farms.

JARUCO TOWNSHIP



Santísima Trinidad.—Barrio. A rural district. No point or village of this name. District contains five farms.

Socorro.—Barrio and finca. A rural district. The point bearing this name is a farm called Finca El Socorro, and is 1½ miles by road southwest of Aguacate.

TOWNSHIP OF JARUCO (CAPITAL, JARUCO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Jaruco	Pueblo (Jaruco)	Urban and rural.		2,056
	Arroyo Vuelto	Rural	2	508
	Bainoa	do	4.7	618
Boca de Jaruco	Boca de Jaruco	do	9.3	447
Playa del Rincón.				
Casiguas	Casiguas	do	4.3	1,236
	Castilla	do	4.8	590
San Matías	Don Martín	do	5.2	731
	Escalera	do	3	447
Jibacoa	Jibacoa	do	13	1,450
Playa Jibacoa.				
	Paradero	do	1.3	700
Río Blanco	San Antonio de Río Blanco	do	3.7	1,606
Tumba Cuatro	Santa Ana	do	8.6	585
Santa Cruz del Norte	Santa Cruz del Norte	do	9.5	1,093

Jaruco.—Barrio and town. Town is built on the southwest corner of a plateau; population, 2,056; estimated number of houses all told, about 250. Houses are mostly of stone, with tile roofing.

There are two principal streets—calle Comercio, the most important, and calle Real. These two streets are parallel and run east and west.

There are many houses that would serve well as barracks, both on calle Comercio and on calle Real. The best of these are on calle Comercio at the corner of Correos. This is a block of solid stone houses, now used as stores and warehouses. Three companies at full strength could be quartered in this block. Other buildings suitable for barracks are in the immediate vicinity.

Practically all of the houses have sheds used as stables, but none are large enough to accommodate any considerable number of horses.

The best place for corrals would be below the town, about half a mile to the east, in order to have the watering facilities afforded by the Jaruco River. The depot building could be used as a storehouse for a small command. It is of stone,

one-story, and about 30 by 80 feet. Two large one-story buildings of stone, on the calzada and half way between the depot and the town, would make excellent quartermaster and commissary storehouses, as they stand alone and are near the depot.

Water supply is obtained from the river Jaruco and from two deep wells in the town. One of the wells is on calle Guaicanamar near Comercio; 150 feet deep; good, clear water, and as far as could be ascertained has a constant flow. The other well is 200 yards due southwest of the corner of Comercio and Guaicanamar. Same as one described above. There are two houses well suited for hospitals, due to the fact that they have upper stories and are well ventilated. One is on calle Real between Correo and Iglesia, and has an estimated capacity of 25 beds upstairs and 25 below. The other, now used as the Hotel Cabrera, corner of calle Comercio and Guaicanamar, has 6 small rooms upstairs; capacity, 25 beds.

The plaza in front of the church would accommodate the permanent camp of two companies or the bivouac of a battalion. It is well drained, built up on one side and revetted with stone, and should be always dry. This is on the western edge of the town and overlooks the deep but comparatively narrow valley of the Jaruco. Near the plaza is a cemetery with a stone wall 100 by 100 feet and 7 feet high; could be used for defensive purposes.

Open, grassy pasture land to the north and west of the town affords the only good camping ground in the vicinity. Water would have to be hauled from the river, or the wells mentioned above; a distance of about half a mile in either case. It would be better to place a temporary camp on the western edge of the town, on the cultivated ground near the wells.

Post-office and telegraph station are at No. 8 calle Comercio.

The railroad station of the U. H. R. R. is almost a mile from the town, east by southeast. Calzada de Paradero runs from the end of calle Comercio to the depot. Depot building is of stone, one story, 30 by 80 feet.

Arroyo Vuelto.—Barrio. A rural district northwest of and adjoining Pueblo barrio.

Bainoa.—Barrio. A rural district which contains 43 farms. There is a village called Bainoa, which is divided between the municipalities of Jaruco and Aguacate. Described under Aguacate.

Boca de Jaruco.—Barrio and village. A rural district which contains 17 farms. The place of this name is a fishing village situated on a small inlet at the mouth of the Jaruco River, 9.3 miles north of Jaruco. Population 330. The village has 2 small stores and 45 huts. Boats of 12 feet draft can enter the bay, and the river is navigable for about 2 miles, and to a point opposite the old town of San Matías for boats of 9 feet draft. This place has always been a smugglers' resort.

Playa del Rincón.—Village. A village of about 15 thatched huts, inhabited by fishermen and charcoal burners. It is situated on a small unprotected bay, with a sandy beach; about 11 miles slightly west of north of Jaruco.

Casiguas.—Barrio and village. A village of 18 or 20 houses, situated 4.3 miles south of Jaruco. Two stores and several of the houses are masonry. Population 120. Water supply obtained from a small stream of clear water which flows near the southern edge of the village. Water not pure. No telegraphic or telephonic communication. Unimproved road connects this place with Jaruco, Bainoa, La Catalina, and Tapaste.

Castilla.—Barrio. A rural district containing 31 farms. No village or point of this name.

Don Martín.—Barrio. A rural district containing 40 farms. No village or point of this name. District contains San Matías.

San Matías.—Sitio. Situated about 8 miles north of Jaruco on the Jaruco River. The ruins of a town which was burned in the insurrection of 1895–1898. There are now two native huts on the site of the old town. Water supply is obtained from the river and is of good quality.

Escalera.—Barrio. A rural district containing 51 farms. No village or place of this name.

Jibacoa.—Barrio and village. Small, unimportant village of no military value; situated 13 miles northeast of Jaruco; has about 40 houses; population, 320. Water supply from river Jibacoa. Camping grounds on the extremely hilly ground west and northwest of village. Has a post-office, but no telegraphic or telephonic communication. Roads lead from this town north to the coast; east to Canasí; south to Mamey Duro and Aguacate; southwest to San Antonio, San Matías, and Caraballo; and northeast to Santa Cruz. All unimproved.

Playa Jibacoa.—Sitio. A small settlement of three or four houses, 2½ miles from the town of Jibacoa. Has a small wooden pier about 30 feet long, with 10 feet of water at the end. The water at the end of the pier is protected by a small reef, about 50 yards out, which comes near the surface of the water and breaks the waves. This place can be recognized from sea by two tall rocks, called La Monja and El Fraile, which stick up on the beach on each side of the river.

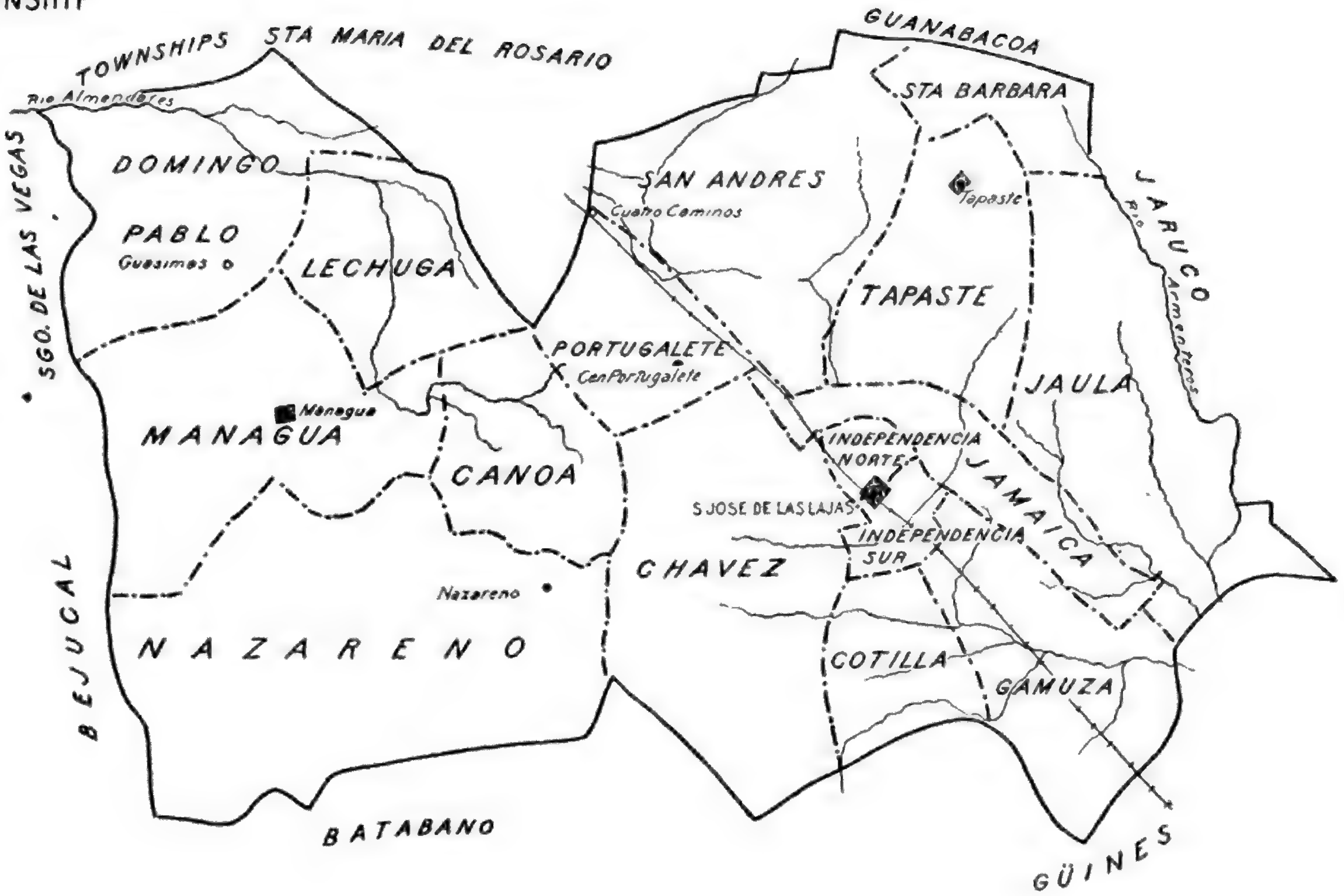
Paradero.—Barrio. A rural district containing 82 farms.

San Antonio de Río Blanco.—Barrio and village. A small place of little importance; situated 3.7 miles northeast of Jaruco; contains about 100 small houses; 8 are of stone, and the rest are of wood. Population about 600. Water from deep wells; three in town. Large plaza in front of church; sufficient ground for the camp of a battalion. A standard-gauge road runs from the sugar mill at Aguacate to the burned ingenio El Conde, five-eighths of a mile from San Antonio; also a branch of the narrow-gauge railroad of centrals Carmen and Lotería, runs near the edge of the village. Has a post-office, but no telegraphic or telephonic communication.

Santa Ana.—Barrio. A rural district containing 26 farms. No village or point of this name, but it contains the sitio of Tumba Cuatro, a small place with a store and four or five huts.

Santa Cruz del Norte.—Barrio and town. A small town situated 9.5 miles northeast of Jaruco on an inlet from the sea which forms a bay that is used as a harbor for small vessels. Has two platforms, one on either side of the bay, to which ships can tie to load and unload supplies. Each of these platforms has a warehouse large enough for use either as a quartermaster or commissary storehouse. Ships of 14 feet draft can enter this harbor and tie to the wharves. Population about 950. Water supply is obtained from the Río las Cruces, which runs through the town, and from a

SAN JOSE DE LAS LAJAS
TOWNSHIP



spring on the east bank of the river, near the south edge of the town. Camping grounds are south of the town in the hilly pasture lands along the river. Town is overlooked on three sides by hills from one-half to 2½ miles distant. To the north lies the sea.

TOWNSHIP OF SAN JOSÉ DE LAS LAJAS (CAPITAL, SAN JOSÉ DE LAS LAJAS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
San José de las Lajas	Independencia Norte	Urban and rural.		1,380
	Independencia Sur	do		1,503
	Canoa	Rural	5	224
	Chávez	do	2.5	507
	Cotilla	do	2.1	255
Domingo Pablo Guásimas.	Domingo Pablo	do	11.2	447
Gamuza	Gamuza	do	3.7	562
Jamaica	Jamaica	do	2.5	702
	Jaula	do	3.5	610
	Lechuga	do	19	217
Managua	Managua	Rural and urban.	11.1	1,842
Nazareno	Nazareno	Rural	6.7	597
Cuatro Caminos	Portugalete	do	5.8	518
	San Andrés	do	3.8	626
	Santa Bárbara	do	6	314
Tapaste	Tapaste	Rural and urban.	4.7	1,684

San José de las Lajas.—Barrio and town. Situated on the Havana-Güines calzada, 18 miles southeast of Havana. It is divided into two barrios or wards, viz, Independencia Norte and Sur. The Havana Central (electric) Railroad, from Havana to Güines, runs through the town.

Town is built principally along the calzada which serves as main street, but there are several side streets. The land surrounding the town has been divided into lots and an effort is being made to sell these lots to the people of Havana as suburban residence sites. Population, 2,873.

Water supply is obtained from two or three wells within the town and the water is distributed in carts and sold to the townspeople. There is a small lake at the southeastern edge of town that is used for watering animals.

Electric lights are to be installed.

There are no buildings that could be used as stables for any large number of animals. Corrals should be established on the southeastern edge of town so as to be able to use the lake for watering purposes.

A two-story building on the corner of the main street and the calzada that branches off to Tapaste could be converted into a 30-bed hospital; the lower part of the building is used as a general store. The town hall, situated near the eastern end of the main street, could be used as a hospital for 50 beds or as a one-company barrack. A small theater in the center of the town could be used as a one-company barrack. Other masonry buildings could be used as shelter for troops in case of emergency. These are all grouped in the center of the town, on the main street.

The Havana Central (electric) Railroad depot is at the eastern edge of town, south of the road. The depot is of concrete, about 130 by 20 feet, and is a combined waiting room, office, and converting station.

There are several masonry buildings in the immediate vicinity of the depot and its sidetracks that could be used as storehouses.

There are two side tracks, one 200 yards long, and one 400 yards long.

Post-office and telegraph office on main street.

Telephone to Güines, Havana, and intermediate points from the Havana Central depot. Camps should be established to the east or southeast of the town so as to use the lake for watering purposes.

Roads lead from San José as follows: A macadam road northwest to Havana; a macadam road southeast to Güines; a macadam road north to Tapaste; an unimproved road west to Nazareno and Managua.

The south, east, or west would be the best direction from which to attack the town. Two miles northwest of the town, the road passes through a narrow pass with high hills on both sides, and it would be extremely difficult for troops approaching from the north to dislodge a defending force occupying these hills.

Canoa.—Barrio. A rural district which contains 23 farms. No place of this name in the district.

Chávez.—Barrio. A rural district containing 62 farms. No point of this name in the district.

Cotilla.—Barrio. A rural district containing 22 farms. No point of this name within the district.

Domingo Pablo.—Barrio and village. A rural district which contains 63 farms. The place bearing the name has 2 stores and 10 small houses. The barrio also contains the sitio of Guásimas, a small settlement of scattered houses on the calzada from Havana, and about 2 miles north of Managua.

Gamuza.—Barrio and sitio. A rural district containing 54 farms. No village of this name, but a store about 3 miles southeast of San José on the calzada is called Gamuza.

Jamaica.—Barrio and village. A scattering village, about 2 miles north of San José de las Lajas, on Havana-Güines calzada. It has 2 small stores and 50 houses, but these are so small and so widely dispersed that it is not difficult to pass through the place without noticing it. Population about 450. A macadam road branches off at this place and runs to Tapaste. Water is obtained from surface wells.

Jaula.—Barrio. A rural district containing 18 farms. No place or point of this name.

Lechuga.—Barrio. A rural district containing 43 farms. No village or point bearing this name.

Managua.—Barrio and village. A small village of about 650 inhabitants. Situated 12 miles southeast of Havana; built along the Havana-Managua-Durán calzada. No telegraphic communication. The buildings are all of the usual type found in a small village and are closely grouped.

Water is obtained from 5 or 6 wells that never go dry. There is a two-story house in the center of the village that could be used for a small hospital of about 20 beds. The schoolhouse is on a side street south of the church and it affords shelter for one company. The main street has several masonry stores that could be used as storehouses. Camps should be made north of the village in order to avoid being commanded by the high hill which lies to the south of Managua. Water would have to be obtained from the wells in the village. A calzada runs north to Havana, and south to San Antonio and Durán. A dirt road runs northeast to Cotorro, and a calzada is being constructed east to Cuatro Caminos (1907). A road, unimproved, runs southeast to

Nazareno, and one runs west to Santiago de los Baños and Bejucal. The hills south of the town command the village and the intervening ground, but if these hills were defended they would be difficult for a command to take from any direction. The country to the east and northeast contains many groves of trees and brush, and is half open. This direction seems to best favor an attack.

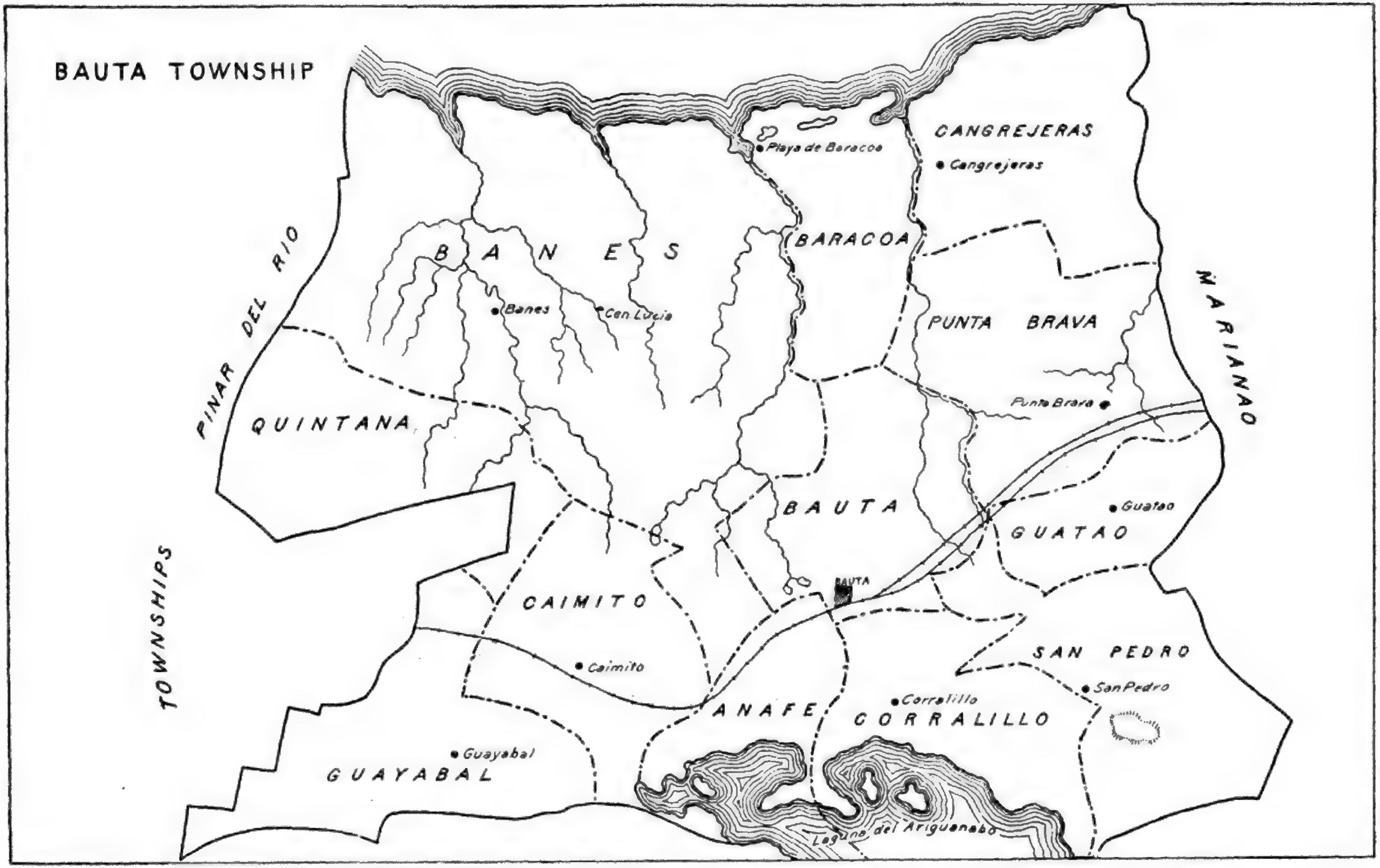
Nazareno.—Barrio and village. District contains 70 farms. The settlement of this name is an old village that has the appearance of falling to pieces. Situated about 7 miles southwest of San José and about 5 miles southeast of Managua. Has 2 small stores and 19 houses, and a population of about 150. Water supply is obtained from a spring in the gulch, south of the village. Camps would have to be made near this spring. Ground is hilly on all sides. Unimproved roads run to San José, Managua, San Antonio de las Vegas, and Cuatro Caminos.

Portugalete.—Barrio. A rural district containing 11 farms. The sugar mill Portugalete is in this barrio. Part of the village of Cuatro Caminos is also in it, the other portion being in the barrio of Capote of the municipality of Santa María del Rosario, where a description will be found.

San Andrés.—Barrio. A rural district containing 86 farms. No village or point of this name.

Santa Bárbara.—Barrio. A rural district containing 40 farms. No village or point of this name.

Tapaste.—Barrio and town. The town is situated about 5 miles north of San José. It is a small place and of little importance; built along one street. Houses are small, one-story buildings, with tile roofs. Has 12 small stores, 125 houses all told, and 1,300 inhabitants. The whole town can be seen from the corner where the calzada from Jamaica enters, and the only good building in the town, except the church, is a store on this corner. The plaza is opposite this store, and is about 100 yards square. The church is in the plaza, as is also the post-office and telegraph office. Water supply of the town is obtained from wells in the yards and from the lakes which lie to the south and west. A small force of not more than a battalion could camp on the plaza, but a larger force could be encamped on the pasture land to the east or northeast of the town.



BAUTA TOWNSHIP

JUDICIAL DISTRICT OF MARIANAO.

Township:	Population.
Bauta (Hoyo Colorado)	13,430
Marianao	18,156

TOWNSHIP OF BAUTA (CAPITAL, BAUTA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Bauta	Bauta	Urban and rural.		2,786
	Anafe	Rural	2	449
Banes	Banes	do	6.2	1,319
Playa de Baracoa	Baracoa	do	6	699
Caimito	Caimito	do	3.7	2,011
Cangrejeras	Cangrejeras	do	6.4	728
Corralillo	Corralillo	do	2.5	309
Guatao	Guatao	do	5.3	680
Guayabal	Guayabal	do	6.2	856
Punta Brava	Punta Brava	do	4.3	2,514
	Quintana	do	7.4	659
San Pedro	San Pedro	do	4	420

Bauta (*Hoyo Colorado*).—Barrio and town. The town is situated 16 miles southwest of Havana on the Havana-Guanajay calzada. Population, 1,907. Water supply obtained from wells in the town. This place is the terminus of the Marianao branch of the United Railroads of Havana, and the Havana Central Electric Road also passes through. The depot of the electric road is a masonry building 130 by 20 feet, and is a combined waiting room, office, and converting station. Near this building and next to the tracks is a masonry store that could be used as a storehouse. The electric road has two side tracks, about 300 yards each. The steam railroad has two side tracks about 200 yards long and a Y track for turning trains around; each branch of the Y is about 500 yards long. A macadam road branches north to the Playa of Baracoa, 4½ miles distant. An unimproved road runs south 2½ miles to the village of Corralillo.

Anafe. Barrio. A rural district. No village or point of this name.

Banes.—Barrio and village. A small village bears this name. Most of the buildings are in ruins. There are a large store and 4 houses. A good stream of water flows north; about 1 foot deep, 15 feet wide; rock and gravel bottom. A good camp could be secured for a company of infantry or a troop of cavalry. Grazing good in the vicinity. From Banes it is 9 miles to Mariel, 6 miles to Caimito, 6 miles to Hoyo Colorado, and 1 mile to central Lucía. A narrow-gauge railroad (36-inch) runs from central Lucía to Boca del Río Banes, 5 miles north.

Baracoa.—Barrio and village. The village is known as Playa de Baracoa and is situated 6 miles by road northwest of Hoyo Colorado, near a small bay and on a point of land formed by a shallow lagoon and a river or inlet which extends inland from the bay for about half a mile. Contains about 50 houses. Water is obtained from a large spring about 1½ miles from the village and near the river. Quantity sufficient for a command of almost any size, and water is of good quality. A new macadam road runs from the beach through a rolling cultivated country for 6 miles to Hoyo Colorado, where it connects with the Havana-Guanajay calzada. Boats not drawing over 6 feet can enter the river. Ships drawing over 30 feet of water can come to within a short distance of the shore—inhabitants say one-half mile. About 1¾ miles west is the Baracoa cave, which was a camping place for insurgents during the war of 1895–1898.

Caimito.—Barrio and town. The town is on the main line of the Havana Central Electric Railroad and on the Guanajay-Marianao calzada at its junction with the calzada to Vereda Nueva. It is about 5 miles east of Guanajay, at the foot of a high ridge, which practically has its beginning at Caimito, and follows the road toward Guanajay for a distance of about 3½ miles.

The ridge is north of the road and commands it for the entire distance. All ground to the south slopes gradually.

Two-thirds of all houses are one-story, frame buildings, with tile roofs, the remainder being about equally divided between stone and cement houses and native shacks.

Population, 1,000.

Water supply is obtained from wells inside of town, of which there are about a dozen; water is of fair quality and sufficient in quantity at all seasons of the year.

Oil lights are used.

Barracks: On the southeast corner of main street and street to railroad station is a new two-story building with tile roof; lower story of cement and stone, upper story of wood; 50 feet long by 50 feet wide; upper part is used as a dwelling and lower portion as a store; no modern closets; well in courtyard. A frame, two-story building, tile roof, second building east of the church; 60 feet long by 25 feet wide; lower part used as a store, upper portion as a dwelling house; condition of repair and sanitary condition poor; well in rear; no modern closets.

Pineapple shipping house at end of street about 150 yards northwest of railroad station; frame, one-story building, tile roof; about 108 feet long by 54 feet wide; wood floor about 4 feet above the ground; sanitary condition good; condition of repair good; no closets; no water; west end of building is one story high, of stone and cement, with tile roof; this portion is used as a residence and a store; it is about 50 feet long by 36 feet wide; court about 50 feet square, in rear.

A railroad siding runs alongside the house; there is no unloading platform, but the cars run so close that the raised floor serves the purpose of a platform. A frame, one-story building, tile roof; about 60 feet long by 30 feet wide; in fair sanitary condition and good repair; used as quarters for the rural guard; situated on west side of street leading to railroad station and close to the main street; the court in rear has stable for 15 horses; there is a well inside of court.

No stables except the one in the quarters occupied by the rural guard.

No transportation corrals. A corral could be placed on vacant ground south of the main street of the town. Water could be obtained from wells in the vicinity.

No hospitals, and no buildings available, except those mentioned as barracks.

Storehouses: The pineapple packing house described under head of barracks. The railroad station and freight house combined, is constructed of wood and has a tile roof; about 90 feet long and 21 feet wide; about 54 feet of this building is two stories high, the second story being used as a residence. Of the lower portion, one room occupied by the ticket office and waiting room is about 36 feet long, and the freight house 54 feet long; has an unloading platform.

The post-office is on the south side of the main street, near west end of town. No telegraph. The telephone line running through the town is owned by the Havana Central Railroad and is not used by the public; the office is in the railroad station.

Owing to lack of water supply, no camp sites available for a large body of troops. A battalion of troops could be camped in the town, on vacant ground south of the main street; water could be obtained from wells; wood obtained from the ridge north of the town; no grazing.

Two one-story, stone and cement blockhouses on ridge north of the town; serviceable against small-arms fire; capable of holding 20 men each. Another blockhouse, same type, south of railroad in southeast part of town.

The Havana Central Electric Railroad runs through the southern part of town.

There is one siding along main track; about 550 yards long. Another siding, about 280 yards long, runs back to the pineapple packing house.

Roads leave town as follows: Calzada west to Guanajay; calzada east to Havana; calzada south to Vereda Nueva. Dirt road north for about 200 yards; becomes a trail and runs to Banes.

Town should be attacked from the north and northwest.

Cangrejeras.—Barrio and village. Village of this name has about 20 small houses and is 6 miles by road northeast of Bauta. Population, about 140.

Corralillo.—Barrio and village. The village of this name has about 25 scattered houses. It is 2½ miles southeast of Bauta and near Lake Ariguanabo. The fish caught in this lake help to support the village. Population, about 160.

Guatao.—Barrio and village. Village is a small, dirty place, with about 30 small houses; situated 5½ miles northeast of Bauta.

Guayabal.—Barrio and village. The village is 6½ miles southwest of Bauta on a calzada which connects with the Caimito-Guanajay calzada at a point 1 mile from Caimito and runs south through Guayabal to within about 2 miles of Ceiba del Agua, where the calzada ends; dirt road continues to Ceiba del Agua. The village is about 1 mile south of the station of Guayabal on the Havana Central Railroad. There is only one street in the village, the calzada, and about 20 shacks are scattered along it. There are a number of large ruins throughout the village. Level country on all sides. Population, about 154. Water obtained from wells; limited amount; very good quality. No buildings that could be used as barracks. Post-office in center of village. No available camp site for anything larger than a company of infantry, owing to lack of water. Roads: Calzada north to Guanajay-Caimito calzada, crossing the Havana Central Railroad 1 mile north of Guayabal; calzada south, to within about 2 miles of Ceiba del Agua. If the ridge north of the Guanajay-Caimito calzada is in possession of the attacking force, the village should be attacked from the north; otherwise it should be approached from the south.

Punta Brava.—Barrio and village. The village is built along the Havana-Guanajay calzada, and is 11.8 miles from Havana. Population, 1,956. Principal industry is the packing and shipping of pineapples, and there are a number of storehouses for the purpose. These storehouses have side tracks from the electric railroad. The water supply is obtained from shallow wells. Post-office is on the main street. Telephone connection at the electric railroad depot. Telegraph office at the steam railroad station. The electric road depot has a galvanized-iron warehouse, 100 by 26 feet, and there is a warehouse across the street from the electric station, 90 by 60 feet. Near the southwestern edge of village are 2 frame storehouses connected by side tracks. One of these side tracks runs to a pineapple warehouse on the northern edge of the village and is about 450 yards long. The electric line has the following side tracks at the depot: Two, 200 yards each; one, 100 yards; one, 300 yards; one, 700 yards; and those mentioned above as connected with the pineapple warehouses. The Marianao Railroad has one side track 150 yards long and another one 200 yards long; no storehouses. A calzada leads south to Guatao and San Pedro.

Quintana.—Barrio. A rural district. No point of this name in the barrio.

San Pedro.—Barrio and sitio. The barrio is a rural district. The point called San Pedro consists of a store and 3 small houses.

TOWNSHIP OF MARIANAO (CAPITAL, MARIANAO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Marianao	Coco Solo	Urban and rural.		2,807
	Lisa	do		652
	Pocito	do		1,838
Arroyo Arenas	Arroyo Arenas	Rural	3.1	1,322
El Cano	El Cano	do	3.7	1,717
La Ceiba	Ceiba	do	2	2,661
Playa de Marianao Jaimanito.	Playa	do	2.4	969
Quemados Curazao.	Quemados	Urban and rural.	.7	4,035
Wajay	Wajay	Rural	5	2,155

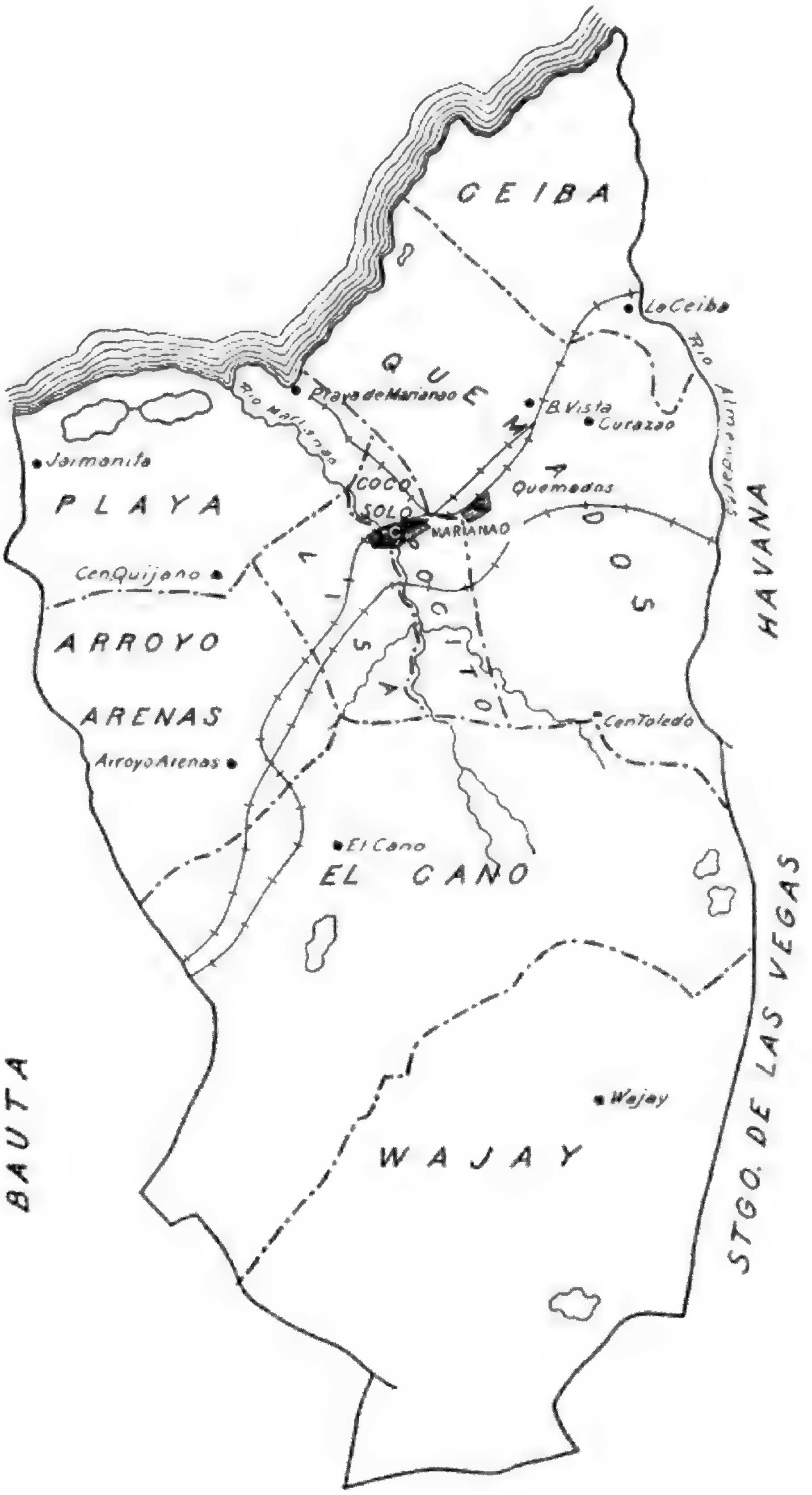
Marianao.—Barrio and town. Situated on the Havana-Guanajay macadam road 5.5 miles southwest of Havana; nearly 10 miles from the business district. The portion of the calzada passing through the town is known as Calle Real, and is the main street. The town is on a ridge about 2 miles from and overlooking the sea. It is considered a very healthful place, and contains a number of fine residences in which many of the well-to-do families of Havana live. It is divided into 3 barrios, viz: Coco Solo, Lisa, and Pocito. Each of these barrios have rural portions adjoining the town. The barrio of Lisa is separated from the main portion of the town of Marianao by the Marianao (Luisa or Quibú) River, and the portion of Marianao in the Lisa barrio appears to be a separate town. It is known as La Lisa and has a small station on the Havana Central Railroad. Within the jurisdiction of Marianao, and about 1 mile from it, is Camp Columbia, in which a large force of American troops was stationed during the first and second interventions. There are a number of small cigar factories in the town, and the Toledo sugar mill is about a mile southeast.

Population, 9,332.

Water is supplied by the Havana city waterworks, and comes from Vento springs. The tanks from which the water is distributed to the town are at Buena Vista, in the barrio of Quemados.

There are no sewers, but there is a project to install a sewer system. The town is lighted by electricity and many

MARIANAO TOWNSHIP



individual acetylene plants have been installed. Electric light plant is on Medrano street about 2 blocks from Real street and near the northeastern edge of town, but is not in operation; the current is furnished by the Havana Central Electric Railroad.

Barracks, stables, transportation corrals, hospitals, and storehouses are all situated at Camp Columbia and are described under that head. In addition to those at Camp Columbia, there are a great number of buildings in the town that could be used for barracks, etc., in case of necessity. The best building in the town is the so-called "Palace." This is a two-story, masonry building and was used for military headquarters and offices in both interventions. It would make an excellent general hospital; situated at 115 Real street.

The telephone office for the local telephone is on Medrano street, two blocks south of Real street. The post-office and telegraph office is on Real street, No. 194. Many individual lines of the Red telephone run to Havana, but there is no central for that system in the town.

Ice machine of the Tropical Brewery and Ice Company is in Ceiba barrio, about 2 miles from Marianao.

City hall, belonging to municipality, is at Real street, No. 142.

The Havana Central Electric Railroad, from Havana to Guanajay, runs along the southern edge of town, and the station is about one-half mile from the southern edge. The Marianao Railroad, from Havana to Hoyo Colorado, runs along the northern edge of town, and the station is on that side. A branch of this road runs 2 miles northwest to the Playa de Marianao. Marianao is also connected with Havana by the Marianao-Vedado electric street railway.

The following roads lead out of town: Two macadam roads run to Havana, one through Ceiba and Cerro, and the other through Camp Columbia and Vedado. A macadam road southwest through Guanajay to Mariel and Cabañas; a branch macadam road leaves this road at Arroyo Arenas and leads south to Wajay, Mazorra, Vento spring, and Santiago de las Vegas. A macadam road runs northwest to the Playa.

An unimproved road runs south, through Toledo, to Wajay and Santiago de las Vegas.

Arroyo Arenas.—Barrio and town. Situated 8.7 miles southwest of Havana, on the Havana-Guanajay calzada, at the intersection of the Marianao Railroad with the Havana Central (electric) road. It is a small town of about 490 inhabitants. Water supply obtained from a well near the macadam road, about 500 yards northeast of the town.

The electric road has one side track, about 200 yards long, and the Marianao Railroad has two short side tracks. A calzada branches south from this town to Wajay, and the Vento spring, with a branch to Mazorra and Santiago de las Vegas. The post-office is on the main street. Railroad stations are on the southern edge of town. Telephone connection at the electric railroad station, and telegraph station at the depot of the steam railroad.

El Cano.—Barrio and village. Situated 1 mile south of Arroyo Arenas, on the calzada which leads from Arroyo Arenas to Wajay, and about 9.5 miles from Havana. A compact village of about 750 inhabitants. Lighted by electricity. Water supply obtained from wells, but there is a large spring at the finca Lima, about 1 mile south of the village. Railroad stations are those of Arroyo Arenas. A store and one house on the macadam road to Wajay, and called Cuatro Caminos del Chico, also belongs to this district.

Ceiba.—Barrio and town. The center of the town is about 2 miles from the center of Marianao. It is built along the calzada running from Marianao to Havana, and borders on the Almendares River, which is the eastern boundary of the barrio as far as the sea. Population, 2,661. Across the river from Ceiba is the barrio of Puentes Grandes, which belongs to the municipality of Havana. Within the limits of Ceiba barrio there are factories devoted to the manufacture of chocolate, biscuits and sweets, cement, beer, and ice.

Playa.—Barrio and village. A rural district bordering on the coast. The point called Playa de Marianao is a small watering place and fishing village, on a small bay about 2.4 miles from Marianao. Population, about 650. It contains a few small summer residences and the large two-story frame building of the Havana Yacht Club. This place contains the only beach in the vicinity of Havana and will undoubtedly some day be a summer resort of importance. At present most of the buildings are small houses in which fishermen and laborers live. A branch of the Marianao Railroad runs to the village, and it is also connected with Marianao, Camp Columbia, and Havana by a macadam road. The ground immediately back of the village is swampy for 200 or 300 yards, but beyond that there is a gentle slope, ascending to Marianao. The village of Jaimanito and central Quijano are within the barrio.

Jaimanito.—Village. A small fishing village; situated on a small bay about 3 miles west of the Playa de Marianao; contains 15 or 18 small houses and 2 small stores. Population, about 100.

Quemados.—Barrio and town. The town of Quemados merges into that of Marianao, and the description of the latter place fits it. It is on the Havana-Guanajay calzada, between Ceiba and Marianao, and near it are the two large water tanks which supply Camp Columbia, Marianao, and Quemados with water. The sitio of Curazao and the sugar mill Toledo are also in this barrio.

Wajay (*Guajay*).—Barrio and village. A small village, of about 550 inhabitants, situated 8.7 miles from Havana on the macadam road which runs through the Vento waterworks. Village is built along one main street, all the houses being small. It has a small church. Country on all sides is flat and half open, and contains many small plots of tobacco and pineapples. Water, obtained from five or six wells within the village, said to be good and abundant.

Roads: A macadam road runs to Havana through Vento waterworks; a macadam road runs to Marianao through Arroyo Arenas; a fairly good dirt road runs to Santiago de las Vegas and Rincón; and a branch macadam road runs to Santiago de las Vegas through Mazorra.

JUDICIAL DISTRICT OF ISLE OF PINES.

Township:	Population.
Isle of Pines	3, 276

TOWNSHIP OF ISLE OF PINES (CAPITAL, NUEVA GERONA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital. *Miles.*	Population.
Nueva Gerona	Nueva Gerona	Urban		879
	Cuchilla Alta	Rural	9.3	453
	Punta del Este	do	27.7	345
Santa Fé	Santa Fé	Urban and rural.	11.1	1,155
	Sierra de Caballos	Rural	5.6	178
	Sierra de Casas	do	3	266

GENERAL DESCRIPTION OF TOWNSHIP.

This township comprises the Isle of Pines.

The Isle of Pines, which derives its name from its numerous pine trees, is some 60 miles west of south of Batabanó. Its area is given as 1,214 square miles; its population 3,276, of which about 400 are Americans.

There are two indentations slightly nearer the southern than the northern coast. On the east is the Boca de Ciénaga; on the west is the Ensenada de Siguanea. As a marsh extends from one of these indentations to the other, the Isle of Pines may be considered as composed of two islands.

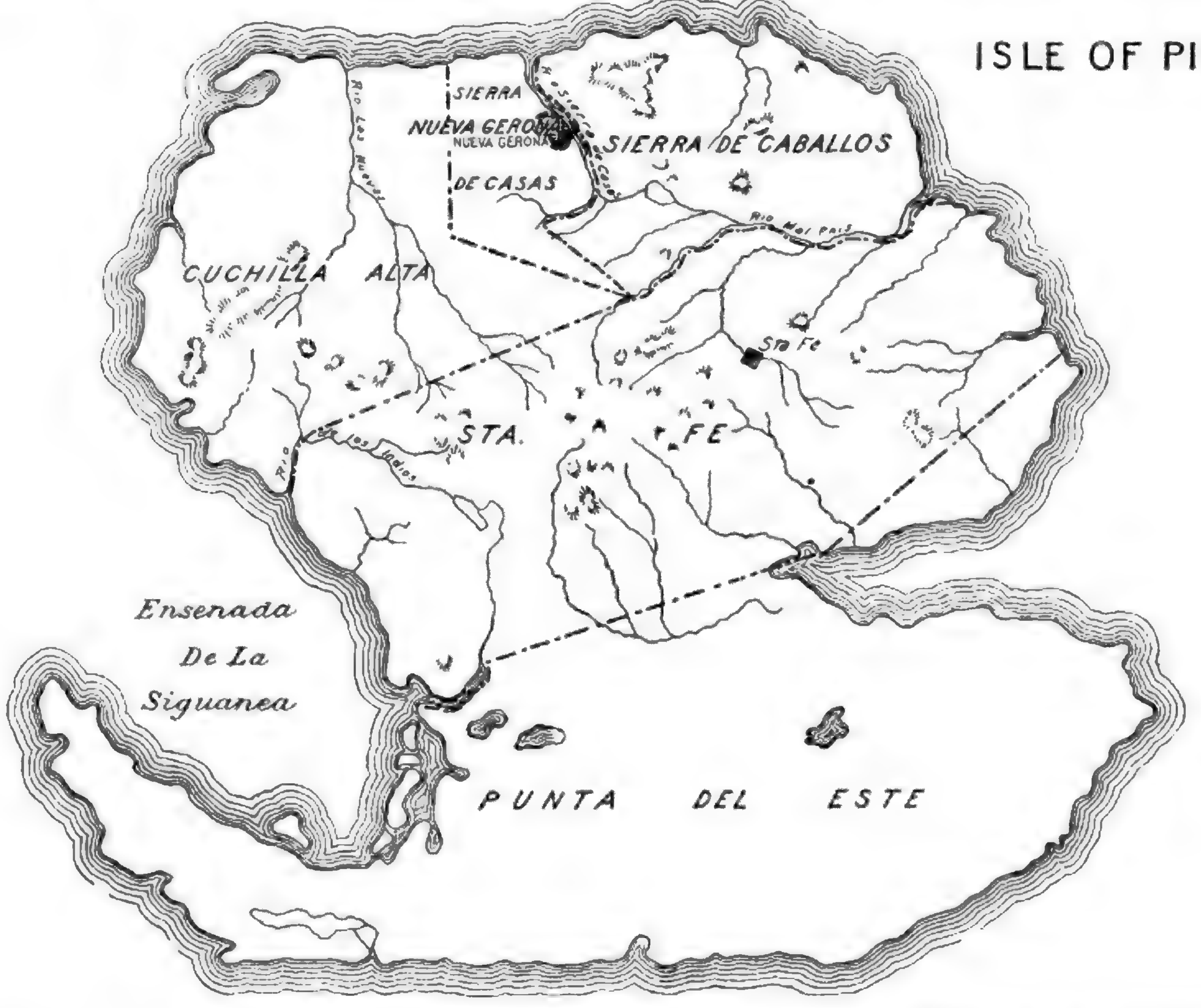
By far the larger portion of the island's surface is made up of nearly level plain, whose general elevation is between 75 and 125 feet above the tide.

Considerable portions of the plain are almost perfectly level, while elsewhere its surface is gently undulating, the undulations rarely reaching more than 30 feet in height.

The streams, which are not numerous, flow in broad shallow depressions, with very gentle slopes. Their channels are sharp cut, from 5 to 15 feet in depth, and having a width proportionate to the size of the stream. These channels are entirely filled when the streams are in flood. Nearly all of the stream channels are rock cut and have no flood plains. The streams reach tide level some distance from the coasts; their lower portions are generally deep.

The principal ones are Río de las Casas, Río de Santa Fé, and Río de Los Indios. These are navigable 4 or 5 miles inland for small sailing craft and the steamer that plies between the island and Cuba. They have channels with depth sufficient to allow passage of boats drawing as high as 18

ISLE OF PINES TOWNSHIP



feet, and the Casas River would furnish a fairly good harbor, but the bars at the mouths of these rivers prevent the passage of more than 8 feet at low water. The tide water reaches inland from 6 to 10 miles.

The principal towns are Nueva Gerona, the capital, and Santa Fé. There are a number of American colonies or settlements, the principal of which are Columbia, McKinley, and Los Indios. Nueva Gerona and Santa Fé are connected by a good highway, 11½ miles long. There are also good wagon roads from Nueva Gerona to Columbia, about 6 miles, and McKinley, 8 miles.

Rising abruptly from the plain above described are several isolated ridges. The most important ones are the Sierra de las Casas and Sierra de Caballos, on either side of Nueva Gerona; Sierra de la Daguilla, in the southeastern portion of the island; and the Sierra de Cañada, in the western portion. The contours of these ridges vary, some being smooth and others rugged, with precipitous slopes.

The southern portion of the island has fewer elevations than the northern.

The northern section of the island is very fertile, while the southern portion is barren.

The pine trees of the island are of the long-leaf, southern variety, and there are several sawmills engaged in cutting the lumber, which is very resinous, and after seasoning becomes so hard that it is difficult to work.

These pines furnish abundant wood for camping purposes, but the prevalence of insects would make camping difficult. These insects are blood feeding, and so small that an ordinary mosquito net is of no value, so that for protection it is necessary to use screens of cheese cloth, which prove quite warm.

DESCRIPTIONS OF BARRIOS AND TOWNS.

Nueva Gerona.—Barrio and town. The town consists of a number of well-built stone buildings and some outlying native huts. It is the capital of the island and has a population of about 879. It is situated on the Casas River, about 4 miles from its mouth, and has a depth of about 15 to 20 feet of water at its wharf, but over the bars at the mouth of the river only about 6 to 8 feet can be carried at low water.

There is a good calzada connecting the town with Santa Fé, 11½ miles distant. It crosses the Casas River at Nueva Gerona on a wood, pile bridge, 150 feet long, which bridge limits navigation for large craft to the portion of the river below it. It passes through a section where the surface soil is Mal Páis gravel, and has been crowned and well ditched. The culverts are of concrete, with the wing walls extending about 1 foot above the road surface; these wing walls limit the width of the road over the culverts to 10 feet, the width on the bridge being the same; between culverts, however, it has sufficient width for vehicles to pass each other easily. The bridges are all of wood and (December, 1906) are in poor condition, but the road as a whole, considering that no work has been done on it since the first intervention, is still an excellent highway.

Cuchilla Alta.—Barrio. A rural district. There is no point of this name in the district.

Punta del Este.—Barrio. A rural district. There is no point of this name in the district.

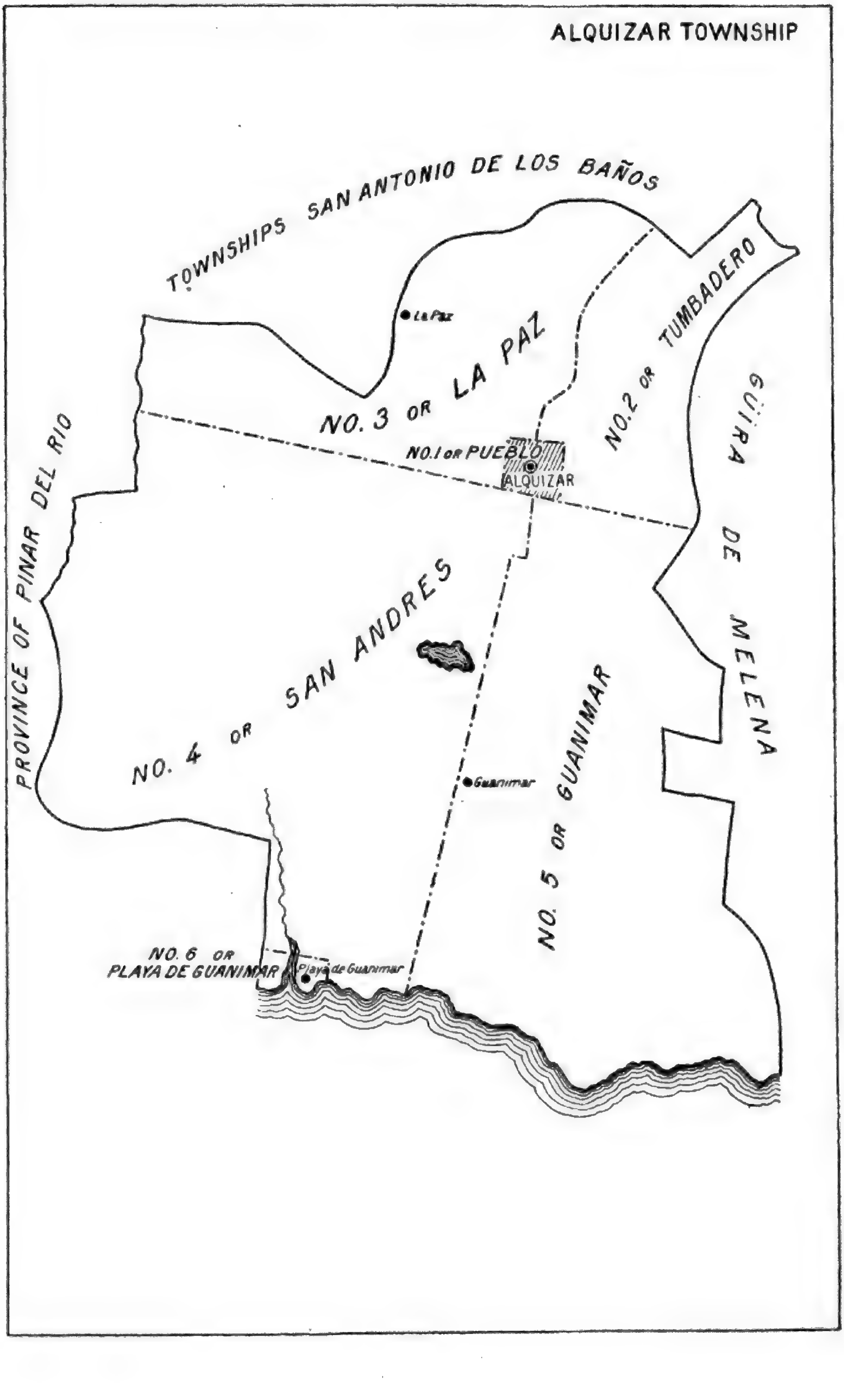
Santa Fé.—Barrio and village. The village is situated on the Júcaro River, 6 miles inland, and consists of a number of well-built stone buildings and some outlying huts. Has a population of about 500. Its port is Júcaro, at which point there is a wharf with about 15 to 20 feet of water, but over the bars at the mouth of the river only about 6 or 8 feet can be carried at low water. The town is connected with its landing place by a road, 4 miles of which is metaled and 2 miles unmetaled. It is also connected with Nueva Gerona by a calzada. There is an unimproved wagon road to Los Indios, 17 miles, via La Ceiba and Cañada, and one to Santa Rita de La Jagua. They are not passable in wet season.

Sierra de Caballos.—Barrio. A rural district. There is no point or village of this name within the district.

Sierra de Casas.—Barrio. A rural district. There is no point of this name within the district.

JUDICIAL DISTRICT OF SAN ANTONIO DE LOS BAÑOS.

Township:	Population.
Alquízar	10,561
Güira de Melena	13,701
San Antonio de los Baños	20,447


ALQUIZAR TOWNSHIP
TOWNSHIPS SAN ANTONIO DE LOS BAÑOS
PROVINCE OF PINAR DEL RIO
GÜIRA DE MELENA
NO. 3 OR LA PAZ
La Paz
NO. 2 OR TUMBADERO
NO. 1 OR PUEBLO
ALQUIZAR
NO. 4 OR SAN ANDRES
Guanimar
NO. 5 OR GUANIMAR
NO. 6 OR PLAYA DE GUANIMAR
Playa de Guanimar

TOWNSHIP OF ALQUÍZAR (CAPITAL, ALQUÍZAR).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Alquízar	Pueblo (Alquízar)	Urban		4,315
Guanímar Rincón.	Guanímar	Rural	3.7	1,374
La Paz	Paz (La)	do	3.7	1,893
Playa de Guanímar	Playa de Guanímar	do	9	62
Frías	San Andrés	do	4.3	1,448
	Tumbadero	do	2.3	1,469

Alquízar.—Barrio and town. Alquízar is on the Western Railway, near the western boundary of Havana Province.

A small, compact town, built in a flat country, which is almost entirely planted in tobacco, and the main industry is the sorting and shipping of tobacco. Water supply obtained from wells within the town; almost every house has its own well, and several on the outskirts of town have small engines, tanks, and pipes for watering the tobacco plants. There are no public wells. The water is good and abundant. Population, 4,315.

There is no sewer system. Lighting is by individual acetylene plant or by oil.

The principal buildings of the town are grouped around what is called the "four corners," where Máximo Gómez and Macéo streets cross. There is no plaza, and in this vicinity are the buildings best suited for barracks. The two houses, 48 and 50 Máximo Gómez street, are used as tobacco sorting houses, and each would make a good barrack for one company.

A sorting house on Macéo street, No. 26, near the railroad, could be used as a shelter for two companies or as a storehouse.

The two-story schoolhouse on Pedro Díaz street would shelter two companies or would make a hospital for 40 or 50 beds.

The buildings mentioned are all in a good state of repair. Water would have to be obtained from wells in the vicinity.

No stables of any size in the town. There is a small corral belonging to the municipality on the northwestern corner of the town; capacity, 20 animals. This could be enlarged to hold any number of animals. Water obtained from a well near corral.

The railroad has a warehouse at the depot, 64 by 32 feet, and there are several buildings in the vicinity that could be used as storehouses. The best one is a tobacco sorting house at No. 26 Macéo; it is about 20 yards from the track.

The railroad depot is on the southern edge of town. The telegraph office and post-office are at No. 1 Martí street. There is no telephone connection.

The best place for a camp is at the Louis Marx tobacco plantation, which is about one-half mile northwest of town. At this place there is an abundance of well water. The numerous tobacco barns could be used to shelter troops and animals.

The country is level on all sides of the town, and camps could be established almost any place, as there are wells on all of the small tobacco plots. Wood is scarce.

No defenses.

The Western Railway runs through town. The depot consists of a small frame station and a warehouse, frame, with tile roof; 32 by 64 feet. There are two side tracks; one, 350 yards, and one, 100 yards.

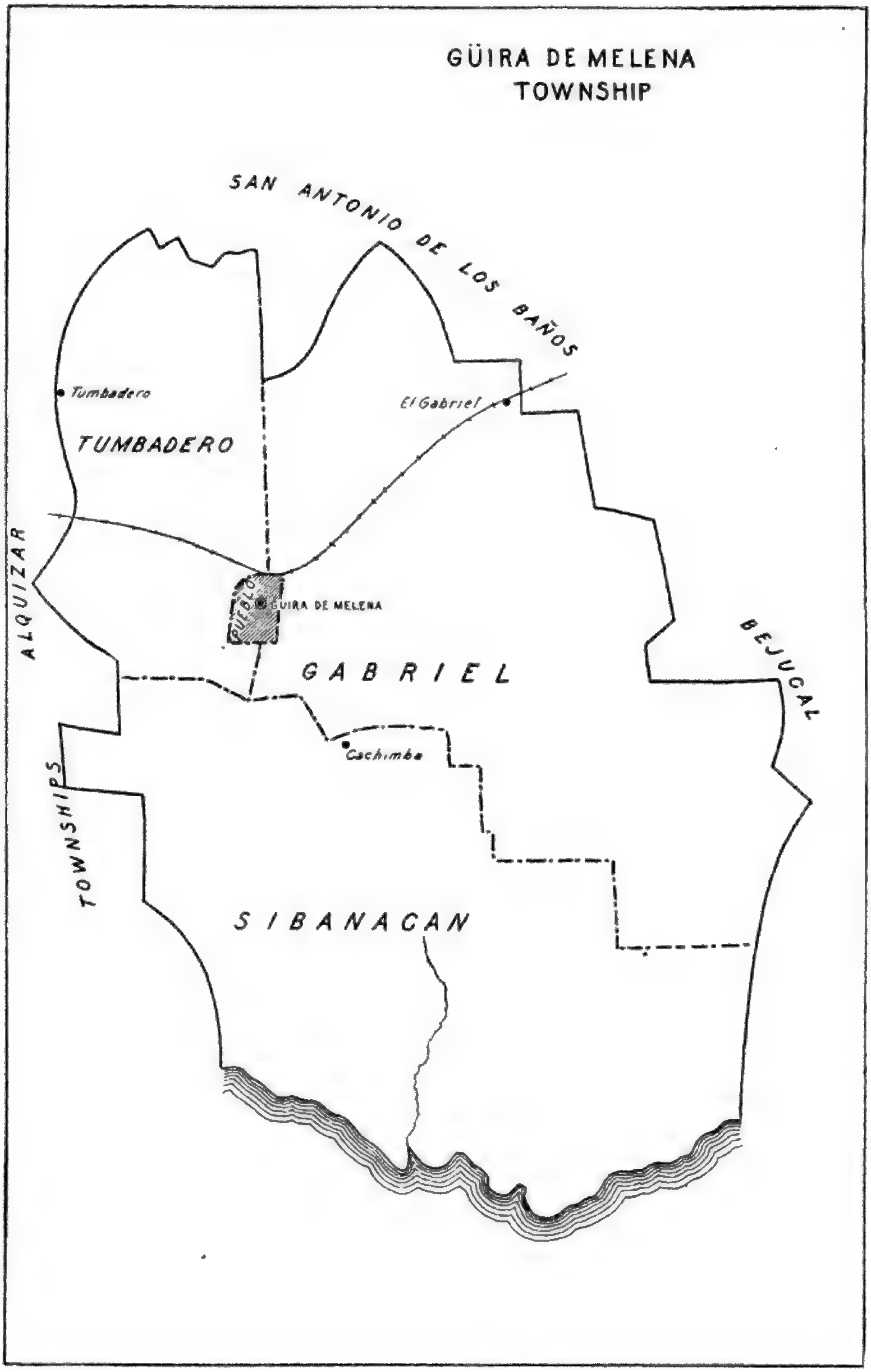
Roads lead out of town as follows: A macadam road east to Güira de Melena, 5 miles, and from there north to San Antonio and Havana; a macadam road to San Antonio de los Baños; a macadam road west to Artemisa; a road north to Vereda Nueva; a road south to the coast and a number of short roads running to various outskirts of the town and connecting with the main roads.

There is no choice as to a point of attack except that troops approaching from the east would have a macadam road as a line of communication.

The country around Alquízar is very flat, is practically all under tobacco cultivation, and groups of trees prevent a very extended view in any direction.

Guanímar.—Barrio and sitio. A rural district. The place called Guanímar is a store, and there is another store in the district called Rincón.

La Paz.—Barrio and sitio. A rural district. The point called La Paz consists of a store and a school house.


GÜIRA DE MELENA
TOWNSHIP
SAN ANTONIO DE LOS BAÑOS
Tumbadero
El Gabriel
TUMBADERO
ALQUIZAR
PUEBLO
GÜIRA DE MELENA
BEJUCAL
GABRIEL
Cachimba
TOWNSHIPS
SIBANACAN

Playa de Guanímar.—Barrio and village. The barrio is a rural district along the south coast. The village consists of a store and 29 huts and is about 12½ miles from Cañas. It has a wooden pier 125 feet long by 5 feet wide, with about 15 feet of water at the end; in bad condition. Population about 160.

San Andrés.—Barrio. A rural district containing a store, called Frías. There is no point called San Andrés.

Tumbadero.—Barrio. A rural district. There is no point called Tumbadero.

TOWNSHIP OF GÜIRA DE MELENA (CAPITAL, GÜIRA DE MELENA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Güira de Melena	Pueblo (Güira de Melena)	Urban		5,550
Gabriel	Gabriel	Rural	3.1	3,135
Sibanacán Cachimba. Playa de Cogio.	Sibanacán	do	3.1	2,823
Tumbadero	Tumbadero	do	3.1	2,193

Güira de Melena.—Barrio and town. On the Western Railway of Havana 27½ miles southwest of Havana. A fairly well-kept town, with most of the streets paved with stones. Few of the houses are more than one story high.

Population, 5,550.

Water supply obtained from wells; there are many in the town. Many of the houses on the edge of the town have elevated water tanks. Some of these tanks have small steam pumps. The railway depot has a steam pump and water tank, as has also a small planing mill beside the depot. The wells average about 40 feet in depth. Water is said to be good.

Most of the houses are lighted by acetylene gas; the others by oil.

There are many buildings that could be used as barracks. None of them are very large, and practically all of them are on the plaza or on calle Cuba, which leads from the depot to the plaza.

There are no large stables in town. A planing mill near the depot could be converted into a stable for 40 or 50 horses, and a yard 75 yards square could be used as a corral. This place has a well, water tank, and small steam pump. At calle Retiro, No. 8, about two blocks from mill mentioned above, is a cart shop that could be used as a stable. The yard of this place is small.

Open ground north of depot could be used as a corral, and water obtained from depot tank or from mill mentioned above.

There are 4 two-story buildings that could be used as hospitals. The city hall, which is on the plaza, would probably hold 50 beds upstairs. The Hotel Inglaterra on calle Cuba, No. 30, would hold 25 or 30 beds upstairs. A new frame building, No. 29, calle Cuba, with porches all around, both upstairs and down, would hold about 25 beds on each floor. A two-story building on calle Cuba, south of the plaza, would hold 20 beds upstairs.

A galvanized-iron warehouse at depot, 120 by 40 feet, would make a good quartermaster storehouse; side track and unloading platform on two sides.

A new T-shaped frame schoolhouse, 100 yards south of depot, is best commissary storehouse in vicinity of depot. Several one-story masonry stores in vicinity of depot could also be used.

The post-office and telegraph office is on calle San Antonio, half a block east of calle Cuba, the main street.

Railroad station is at the northern end of calle Cuba.

A large, open, grassy stretch of land, bordering the southern edge of town, is the best camp site in the vicinity. The burned ingenio Victoria is about 1 mile south of town and ern edge of town, is the best camp site in the vicinity. The pumps and tanks are still there and could be easily refitted and made serviceable.

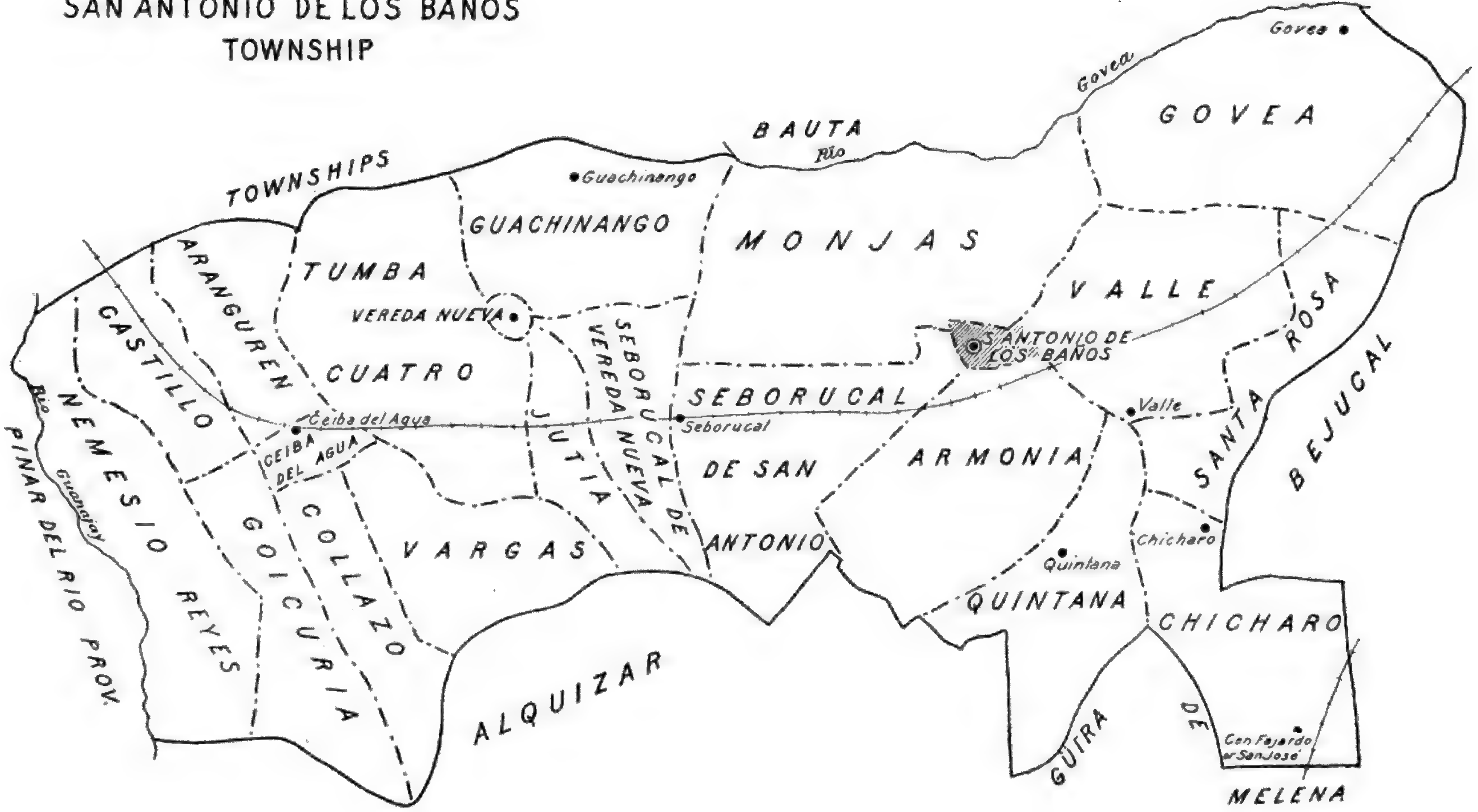
Ditches have been dug through this ground to drain it in the wet season, and small pastures are numerous in the vicinity. Fuel would have to be brought in, as none exists in vicinity.

No defenses.

There are two ordinary station side tracks at the depot. Railroad warehouse described above.

The following roads lead out of town: A calzada west for 5 miles to Alquízar; a macadam road north to San Antonio de los Baños; a road south, which runs to the coast road and from there goes east to Batabanó, or west to the

SAN ANTONIO DE LOS BAÑOS TOWNSHIP



Vuelta Abajo country; a road east, connecting with roads to Bejucal and Quivicán.

The best line of approach to attack the town would be from the north, as there are some slight folds in the ground, stone fences, and many hedges and groves of trees. In other directions the ground is more open and difficult to cross.

Gabriel.—Barrio and village. Village of this name is on the Western Railway of Havana, 24.2 miles from Havana; population, about 500. Contains 35 small houses and about the same number of native huts. Village is in a flat, cultivated country. Water obtained from wells. A calzada and a switch of the railroad run from the place to the ingenio Fajardo, 1 mile distant. Station has a side track 300 yards long.

Sibanacán.—Barrio and village. The place bearing this name is a village of about 16 small houses.

Cachimba.—Village. A small place containing 2 general stores, a schoolhouse, and about 25 dwellings, most of which are huts. Situated about 3 miles southeast of Güira.

Playa de Cogio.—Sitio. On the south coast, 10 miles by road southeast of Güira de Melena and on a drainage canal which runs inland for 3½ miles. Contains a few huts.

Tumbadero.—Barrio and sitio. The sitio is a small place containing 7 huts.

TOWNSHIP OF SAN ANTONIO DE LOS BAÑOS (CAPITAL, SAN ANTONIO DE LOS BAÑOS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
San Antonio de los Baños	San Antonio de los Baños	Urban		9,125
Aranguren	Aranguren	Rural	7.5	762
Armonía	Armonía	do	1.5	770
	Castillo	do	9.3	236
Ceiba del Agua	Ceiba del Agua	do	8.5	782
Chicharo	Chicharo	do	5.5	489
	Collazo	do	7.7	199
	Goicuría	do	8.7	341
Govea	Govea	do	5	960
Guachinango	Guachinango	do	7	575
	Jutía	do	5	420
Monjas	Monjas	do	1.3	1,045
	Nemesio Reyes	do	10	181
Quintana	Quintana	do	2	858
Santa Rosa	Santa Rosa	do	4.5	704
Seborucal	Seborucal de San Antonio	do	3.5	533
	Seborucal de Vereda Nueva	do	4.3	593
	Tumba Cuatro	do	6.5	429
Valle	Valle	do	2.5	311
	Vargas	do	7	97
Vereda Nueva	Vereda Nueva	do	7.5	1,037

San Antonio de los Baños.—Barrio and town. A town situated on the Guanajay branch of the U. H. R. R. and about 22 miles southwest of Havana. Manufacture of cigars is the principal industry.

Population, 9,125.

Water is obtained from the Ariguanabo River, which originates in the Ariguanabo Lake and disappears in a cave just below the town. Water is pumped to a concrete tank on the hill near the city jail and distributed by pipe line. Capacity of pumping station 18,000 gallons every 6 hours; capacity of tank 18,000 gallons. It is on the edge of the river near the northeast edge of the town.

The two principal streets have a sewer system. These streets are parallel and are called Máximo Gómez and Juan Delgado. The town is lighted by electricity and the electric-light plant is on the bank of the river near the northeast edge of the town. Plant is a 75-kilowatt direct-current machine and is operated by water power.

The old Spanish barracks is a building inclosing a square courtyard, situated on the hill at the north end of McKinley street. The building is used as a cigar factory. It measures about 120 by 120 yards and 1,000 men were quartered in it before 1898, but not more than one battalion at full strength should be quartered in it. It has running water from the city waterworks, but no sewer connections. A large cistern in the courtyard is used as a cesspool.

City jail, capacity 200 men, situated on the hillside at the north end of Monteymoso street near the above-mentioned barracks.

Stables would have to be improvised, as there are none of any size in the town. Corrals should be established near the railroad depot on the east edge of town, because the land here is level and the river is near.

The front of the city jail has 2 stores, and the upper part is the city hospital, with a capacity of 60 beds. There are a number of two-story buildings in the town that could be converted into hospitals Among these are a house on Plaza Central, corner of Martí street, capacity 60 beds; a house on the corner of Martí and McKinley streets, capacity about 40 beds.

The railroad depot has a masonry warehouse about 100 by 30 feet. There is also a large building on the corner of Vivacano and San Gabriel streets near the railroad that would make a good quartermaster or commissary storehouse. Other buildings close to the depot could also be used.

Post-office and telegraph office are at 70 Martí. No telephone office. Railroad station is on the southeast edge of town.

Ice machine is on the bank of the river near the northeast edge of town; capacity, 1½ tons per day.

Open, level ground back of the old Spanish barracks, to the north, affords a good camp site for 1 regiment. Water for animals to be obtained from the river, which skirts the camp site.

The railroad has 3 side tracks; 2 about 300 yards long, and 1 about 200 yards long.

The best approach to the town to attack it would be from the west, as the country is broken and half open. To the south the country is more open and level. To the north is the river Ariguanabo and the lake of the same name. The east has the advantage of the macadam road from Havana, but the country is quite open.

Aranguren.—Barrio and village. A rural district. Place of this name has about 20 houses; district contains 68 farms.

Armonía.—Barrio and sitio. A rural district. Point of this name has 4 houses. District contains 65 farms.

Castillo.—Barrio. A rural district. No town or village of this name in the district. District contains 64 farms.

Ceiba del Agua.—Barrio and village. The village is built principally along one main street. Situated near the western edge of Havana Province on the Guanajay branch of the U. H. R. R. with side tracks amounting to about 600 yards; contains a number of small tile-roof houses that could be used for military purposes if necessary. Population about 500. Water obtained from wells; said to be good and abundant. A macadam road runs from this place to Artemisa. Unimproved roads run to Vereda Nueva and Alquízar. Country level and cultivated on all sides, mostly in tobacco.

Chicharo.—Barrio and sitio. A rural district. Point called Chicharo has 4 houses. District contains 13 farms and central San José (Fajardo).

Collazo.—Barrio. A rural district. No village of this name in the district. District contains 27 farms.

Goicuría.—Barrio. A rural district. No town or village of this name in the district. District contains 46 farms.

Govea.—Barrio and sitio. A rural district. The point called Govea has 1 store and 8 huts, and is situated 5½ miles by road northeast of San Antonio de los Baños. District contains 91 farms.

Guachinango.—Barrio and sitio. A rural district. Place of this name has 1 store and 3 or 4 houses, and is situated 6½ miles by road northwest of San Antonio de los Baños. District contains 85 farms.

Jutía.—Barrio. A rural district. No point of this name in the district. District contains 35 farms.

Monjas.—Barrio and sitio. A rural district. The point called Monjas has 3 houses. District contains 101 farms.

Nemesio Reyes.—Barrio. A rural district. No village of this name in the district. District contains 15 farms.

Quintana.—Barrio and sitio. A rural district. The point of this name has 3 houses, and is 2 miles by road south of San Antonio de los Baños. District contains 62 farms.

Santa Rosa.—Barrio and sitio. A rural district. The point called Santa Rosa has 2 houses. District contains 88 farms.

Seborucal de San Antonio.—Barrio. A rural district which contains the sitio Seborucal and 57 farms. The sitio Seborucal is situated 4 miles west of San Antonio de los Baños and consists of about 3 houses.

Seborucal de Vereda Nueva.—Barrio. A rural district. No village or town of this name. District contains 80 farms.

Tumba Cuatro.—Barrio. A rural district. No village or town of this name. District contains 33 farms.

Valle.—Barrio and sitio. Barrio is a rural district which contains 43 farms. The sitio is a general store situated 2¼ miles east of San Antonio de los Baños.

Vargas.—Barrio. A rural district. No village or town of this name. District contains 5 farms.

Vereda Nueva.—Barrio and town. The town is situated at the end of a branch calzada from Caimito, 24.1 miles southwest of Havana. It is about 2 miles north of the station of Saladrigas on the Guanajay branch of the U. H. R. R. Population, 1,037. Water supply obtained from a number of wells within the town. Post-office is on the main street. No telegraphic communication. All of the buildings which might be of any service are closely grouped around the corner of the calzada and the main street. These buildings are of the usual masonry and frame construction and of the small size usually found in the small towns. A road leads west to Ceiba del Agua, and one leads east to San Antonio de los Baños. A calzada runs south to the station Saladrigas, and another one runs north to Caimito and from there to Havana. There is level, half-open ground on all sides of the town.

PROVINCE OF MATANZAS.

TABLE OF DISTANCES, IN MILES, BETWEEN TOWNS IN PROVINCE OF MATANZAS.

Alacranes (Alfonso XII).																									
8	Bolondrón.																								
35	45	Canasí.																							
44	36	53	Cárdenas.																						
44	36	67	37	Cervantes.																					
28	20	46	16	21	Cimarrones (Carlos Rojas).																				
53	45	80	45	13	34	Colón.																			
29	39	8	45	59	38	72	Corral Nuevo.																		
21	13	48	36	23	20	32	40	Corral Falso (Pedro Betancourt).																	
29	26	61	30	17	14	26	53	13	Cuevitas.																
30	27	30	19	40	19	53	22	27	33	Guamacao.															
53	45	66	27	11	26	10	58	32	26	34	Guamutas.														
30	22	50	20	17	4	30	42	16	10	23	24	Jovellanos (Bemba).													
36	28	43	8	29	8	33	35	28	22	11	23	12	Lagunillas.												
22	19	29	27	38	17	51	21	19	32	8	43	21	16	Limonar.											
73	65	96	53	29	50	16	88	52	46	60	26	46	49	67	Macagua.										
21	36	16	37	51	30	64	8	32	45	16	50	34	27	13	80	Matanzas.									
66	58	93	63	26	47	13	85	45	39	66	23	43	55	64	10	77	Palmillas.								
41	33	56	17	13	13	20	48	30	24	24	10	17	13	29	36	40	32	Recreo (Máximo Gomez).							
37	29	60	31	7	13	16	59	16	10	32	16	10	22	30	36	44	29	14	Roque.						
8	18	29	41	54	38	67	21	31	44	22	61	32	33	14	83	18	76	51	47	Sabanilla del Encomendador.					
13	21	26	57	57	41	70	23	34	42	32	66	42	49	24	86	20	83	61	50	10	San Antonio de Cabezas.				
66	58	80	43	22	43	13	53	45	39	50	16	43	39	60	10	66	20	26	29	80	79	San José de los Ramos.			
16	26	19	42	62	33	75	13	39	52	22	69	40	32	16	91	10	84	45	55	8	10	88	Santa Ana.		
3	8	37	44	44	28	57	31	21	34	27	56	30	36	19	73	28	66	51	37	10	13	66	18	Unión de Reyes.	
85	100	80	101	115	94	128	72	96	109	80	114	98	91	77	134	64	141	104	108	82	84	130	74	92	Havana.

PROVINCE OF MATANZAS.

LOCATION AND BOUNDARY.

The province of Matanzas is situated in the west central part of the island. Its northern part is in the most fertile and productive portion of the island and is noted for its picturesque landscapes.

Its southern part is composed of the large swamp called Gran Ciénaga Occidental de Zapata. This swamp is on both sides of the River Hatiguanico, the upper portion extending 10 miles inland in the province of Matanzas and the lower portion extending 5 miles inland in the province of Santa Clara.

The province is bounded on the north by the Straits of Florida, on the east and south by the province of Santa Clara, and on the west by the Gulf of Batabanó and the province of Havana.

AREA AND POPULATION.

The area of the province is 3,700 square miles.

The width between extreme points north and south is about 60 miles, and the length between its extreme points east and west is about 95 miles.

The population is 239,812, divided as follows: Native white, 54.6 per cent; foreign white, 7.4 per cent; colored, 38 per cent; or white, 62 per cent; colored, 38 per cent.

JUDICIAL AND MUNICIPAL DISTRICTS.

It is divided into four judicial districts, viz, Matanzas, Cárdenas, Alacranes, and Colón. It is also divided into ten municipal districts or townships, viz, Alacranes, Bolondrón, Cárdenas, Colón, Jagüey Grande, Jovellanos (Bemba), Martí (Hato Nuevo), Matanzas, Pedro Betancourt (Corral Falso), Unión de Reyes.

PROVINCIAL GOVERNMENT.

There is a governor and a provincial council of eight members elected by the people. Each municipal district is presided over by a mayor aided by a municipal council.

CAPITAL AND PRINCIPAL TOWNS.

The capital is Matanzas. It has great commercial activity and is noted for the beauty of its surroundings.

Cárdenas is also an important commercial center.

Colón is in the heart of the sugar-producing region.

GEOGRAPHY AND TOPOGRAPHY.

The ground is generally level, with some hills which belong to the central group of mountains.

There is a large group northwest of Matanzas containing one prominent point, the Pan de Matanzas, which reaches an altitude of about 1,300 feet. Some hills occur also between Matanzas and Cárdenas.

In general these isolated hills or groups have rounded summits, but in their lower slopes are frequently very steep, rising abruptly from the surrounding level plains.

In the extreme northwest is the rocky range of Sierra de Camarones and the Arcos de Diego; in the northeastern part, Hato Nuevo de Santa Clara; and in various parts of this central group district of mountain ranges are to be found many hills and elevations, among which are the group of Havana, Tetas de Camarioca, Palenque, Cumbre, Carbas, Limonar, Santa Ana, Gonzales, Triana, Cimarrones, and Las Guimbambas.

On the southern coast is the greater half of an immense swamp, called Gran Ciénaga Occidental de Zapata.

There is a large plain extending from Cárdenas to the east.

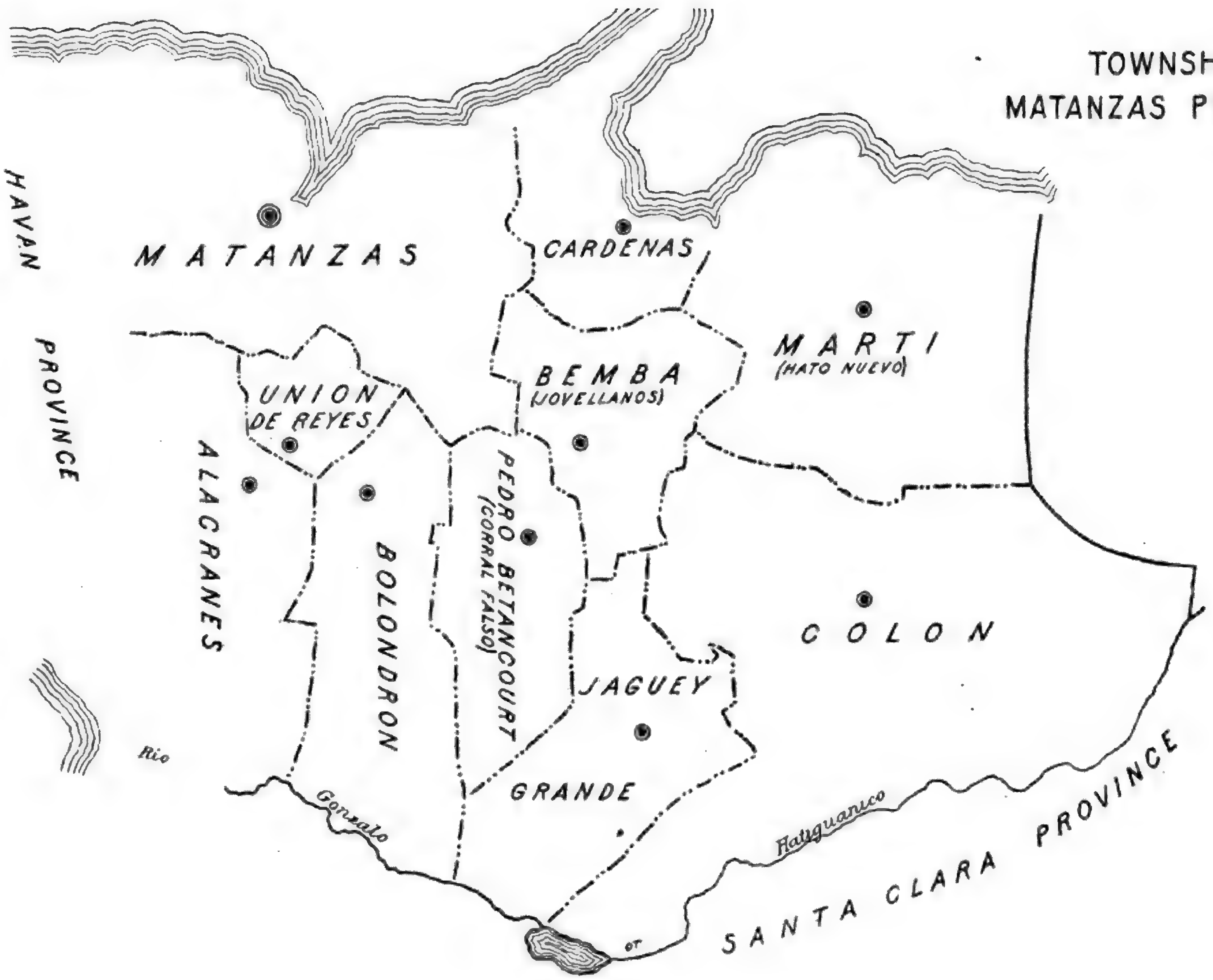
The tropical valley of the Yumurí has great natural beauty.

Marshes: Majagüiyal, Yumurí, and Zapata. The marshes Hicacos and Charco are salty. The latter yields many hundred tons of salt annually.

RIVERS.

In Matanzas the principal rivers flow to the south, the greatest general height of the land being near the northern

TOWNSHIPS
MATANZAS PROVINCE



coast. The principal river is the Hatiguanico or Negro, into which flow the rivers Gonzálo, Guareiras, and the Hanábana. Other rivers are, Palma, Caña, Camarioca, Cimarrones, Bacunayagua, Puerto Escondido, Yumurí, San Juan, and Canímar. The Yumurí, San Juan, and Canímar empty into Mantanzas Bay and are navigable for a short distance.

COAST LINE.

On the northern coast are the highlands skirting Matanzas Bay, indented by the bays of Matanzas, Cárdenas, and Maya. The coast line of this province extends only along the northern boundary, the other boundaries being either land or rivers.

AGRICULTURE, INDUSTRY, AND COMMERCE.

The principal products of the province are sugar cane, alcohol, and timber. Matanzas, the capital of the province, is a city of commercial activity. The principal industries are rum distilling, sugar refining, and the manufacture of guava jelly. The chief articles of export are sugar and molasses.

JUDICIAL DISTRICTS AND MUNICIPAL DISTRICTS.

Judicial district.	Township.
Alacranes	Alacranes.
	Bolondrón.
	Unión de Reyes.
Cárdenas	Cárdenas.
	Jovellanos.
	Martí (Hato Nuevo).
Colón	Colón.
	Jagüey Grande.
	Pedro Betancourt (Corral Falso).
Matanzas	Matanzas.

JUDICIAL DISTRICT OF ALACRANES.

Township:	Population.
Alacranes	15, 838
Bolondrón	12, 377
Unión de Reyes	11, 202

TOWNSHIP OF ALACRANES (CAPITAL, ALACRANES).

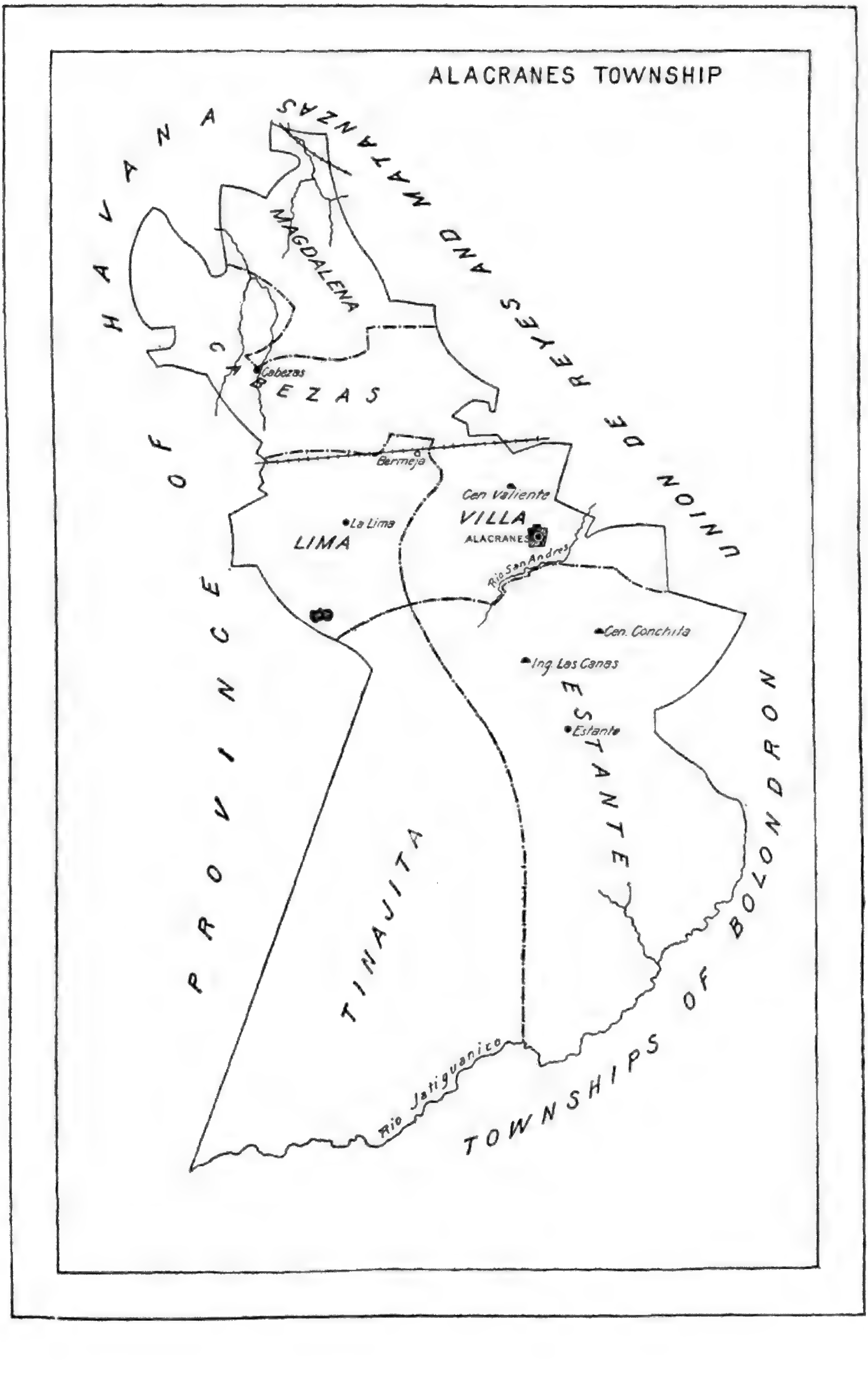
wn, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
anes	Villa (Alacranes)	Urban and rural.		2,870
zas	Cabezas	Rural	10	3,731
ıte	Estante	...do	6	3,855
	Lima	...do	6	2,892
meja.				
	Magdalena	...do	11¼	1,431
	Tinajita	...do	13⅛	1,059

lacranes.—Barrio and town. The rural portion of the
rio contains ingenio Valiente and a few fincas. The town,
ch was formerly known as Alfonso XII, is situated 20
es south of Matanzas on a branch railway from Unión
Reyes. Dependent entirely upon agricultural resources
urrounding cane country. Terminus of extensive system
plantation railways running south to edge of Zapata
mp and connecting with ingenios Las Cañas and Con-
a. Headquarters of a judicial district. Location of
on and residence of judge. Population, 2,870.

o public water system. Town supplied by numerous
llow wells. The quantity is ample, and the quality is
d where precautions are taken to prevent pollution. No
er system. Neither electric nor gas plants. Streets
rsely supplied with oil lamps. Acetylene gas quite gen-
ly used.

he Spanish Club, church, ayuntamiento, and prison
ld each quarter a company. These buildings are suit-
, having large rooms, but are without sanitary conven-
es. A few private dwellings would make suitable bar-
s. Water supply for all from private wells. There are
tables or corrals. Open ground in all directions. Small
ure to north near ingenio Valiente, where there is ample
er supply, would make good transportion corral.

he ayuntamiento building, church, and Spanish Club
ld be the most suitable buildings in town for hospital
poses. There are no suitable buildings on railway for
ehouses; stores along calle Libertad, near the railway,
ld have to be used. Railway station at south end of


ALACRANES TOWNSHIP
PROVINCE OF HAVANA
UNION DE REYES AND MATANZAS
TOWNSHIPS OF BOLONDRON
MAGDALENA
CABEZAS
Cabezas
Bermeja
Cen Valiente
VILLA
ALACRANES
La Lima
LIMA
Rio San Andres
Cen. Conchita
Ing. Las Canas
Estante
ESTANTE
TINAJITA
Rio Jatiguanico

calle Libertad. Post-office and telegraph office on plaza opposite church. No telephone central. Only available camp site is near ingenio Valiente, one-half mile north; ground for a battalion; water and grazing plentiful; wood about 2 miles distant. No defenses. One side track for 40 cars, and many miles of private railway to south would furnish all necessary trackage. Loading facilities poor. No platform except that of small station.

Roads lead out of town to Sabanilla, Bermeja, Unión, Conchita, and Las Cañas. Surrounding country is flat and low. Town best approached from north and northwest.

Cabezas.—Barrio and town. Town situated 10 miles northwest of Alacranes, on branch of United Railroads of Havana from latter place. Small and unimportant; entirely dependent on colonias and fincas of vicinity. No local industries. Population, 1,500.

The water supply is obtained from a spring in a limestone ravine about one-half mile north, from which water is hauled in small tank carts. This spring is walled up, and the water, though somewhat discolored by seepage, is good and plentiful. No sewer system. The streets are sparsely lighted by oil lamps. The church, which is of usual construction, about 40 by 80 feet, is the only suitable building for barracks. It is in good repair and clean, though without sanitary arrangements. There is a private house and store of ample size for 50 men if the situation demanded it. It is new and clean, though without sanitary arrangements; has a well, but it is not reliable. Stables for 15 animals at rural guard barracks; no others of consequence. No corrals. There is open ground to the east, west, and south. Ground to the west near the cliffs would probably be best for corrals, as it is near a small stream which flows from spring described above. Grazing fair.

The church and building described above could be used for hospital purposes; also the rural guard barracks, which would hold about 8 beds.

Railway station building could be used for storehouse. It is of the usual construction, 25 by 60 feet, and has a platform 8 feet wide. Station and telegraph office in west end of building. Post-office is on east side of the main street near railway station. Private telephone line to fincas Quintenelle and Boldivieso about 3 miles northwest; instrument at station. Best camp site is to the north, along base of cliffs and near entrance to the arroyo where water supply is located; grazing good; water from spring 400 yards distant; wood in sufficient quantities for a battalion, on cliffs and along the various arroyos in the vicinity.

Railway runs east and west along southern edge of town. Two sidetracks with capacity for 60 cars. The platform at the station affords the only facilities there are for loading and unloading. Roads run to Ceiba Mocha via Amorosa; Matanzas via ingenio Magdalena; and to ingenio Jesús María, Bermeja, Esperanza, and Pipián.

Best line of approach would be from rough country to north. Entire town commanded by cliffs one-half mile north.

Estante.—Barrio and village. The barrio is a section of country made up of about 183 fincas and contains the sugar mills Conchita and Las Cañas. The village consists of 2 stores, a schoolhouse, and about 20 houses, and is 6 miles south of Alacranes. Population about 300. Was rather important during war 1895–1898, and revolution of 1906, on account of being stopping point of troops operating along south coast and swamp.

Lima.—Barrio and sitio. The barrio is a section of country made up of about 169 fincas. It contains about 115 dwelling houses, 24 stores, etc., 4 schoolhouses, and the town of Bermeja. The sitio consists of a store situated about 6 miles west of Alacranes.

Bermeja.—Town. Situated 5 miles west of Unión de Reyes on line of United Railroads of Havana. Unimportant town; dependent on agricultural resources of surrounding country. No local industries of any consequence. Population, 1,087.

Water supply is obtained from two public wells and many private ones; quantity plentiful and quality good. Railway company maintains a pumping station and has a 2,000-gallon tank on the track near station. This is the most easily available, most plentiful, and best water supply for 10 miles east or west. No sewer system; no lighting plant. A few oil lamps on the streets. There are no suitable buildings in the town for barracks, excepting, possibly, the church, which will hold 100 men in an emergency. If more shelter were indispensable, houses and stores could be obtained for a battalion. Enough could be found which are in a fair state of repair, but none have sanitary arrangements. Private wells would have to be used. No stables of consequence. No corrals. Open fields, mostly in cane, in all directions. Ground higher and less under cultivation to north; most available therefore for camp or corral purposes. Water supply from railway well. Buildings for hospital purposes would have to be selected from those mentioned above as suitable for barracks. A stone freight station, 25 by 100 feet, on northern edge of the town would serve for storehouse; tracks on both sides, and usual facilities for loading and unloading. Railway station and telegraph office at railway crossing on main street at northern edge of town. Post-office on main street near center of town.

The most suitable camp site is north of railroad track; water supply from railroad well; plenty of young cane and some grazing farther north; wood can be obtained in limited quantities, 1 to 2 miles from town. The railroad runs along the northern edge of the town; there are two side tracks with capacity for about 50 cars. Stock and supplies could be unloaded at freight house. Roads lead out of town to Unión de Reyes, Alacranes, Cabezas, Sabanilla, and Los Palos.

Best line of approach for attack would be from the north, in which direction land gradually ascends and becomes rougher.

Magdalena.—Barrio. A section of country lying northwest of Alacranes. Contains about 58 fincas. In the barrio are 3 stores and 2 schools. There is no settlement bearing the name.

Tinajita.—Barrio. The barrio is a section of country lying southwest of Alacranes. Contains about 17 fincas. In the barrio are 2 stores and 2 schools.

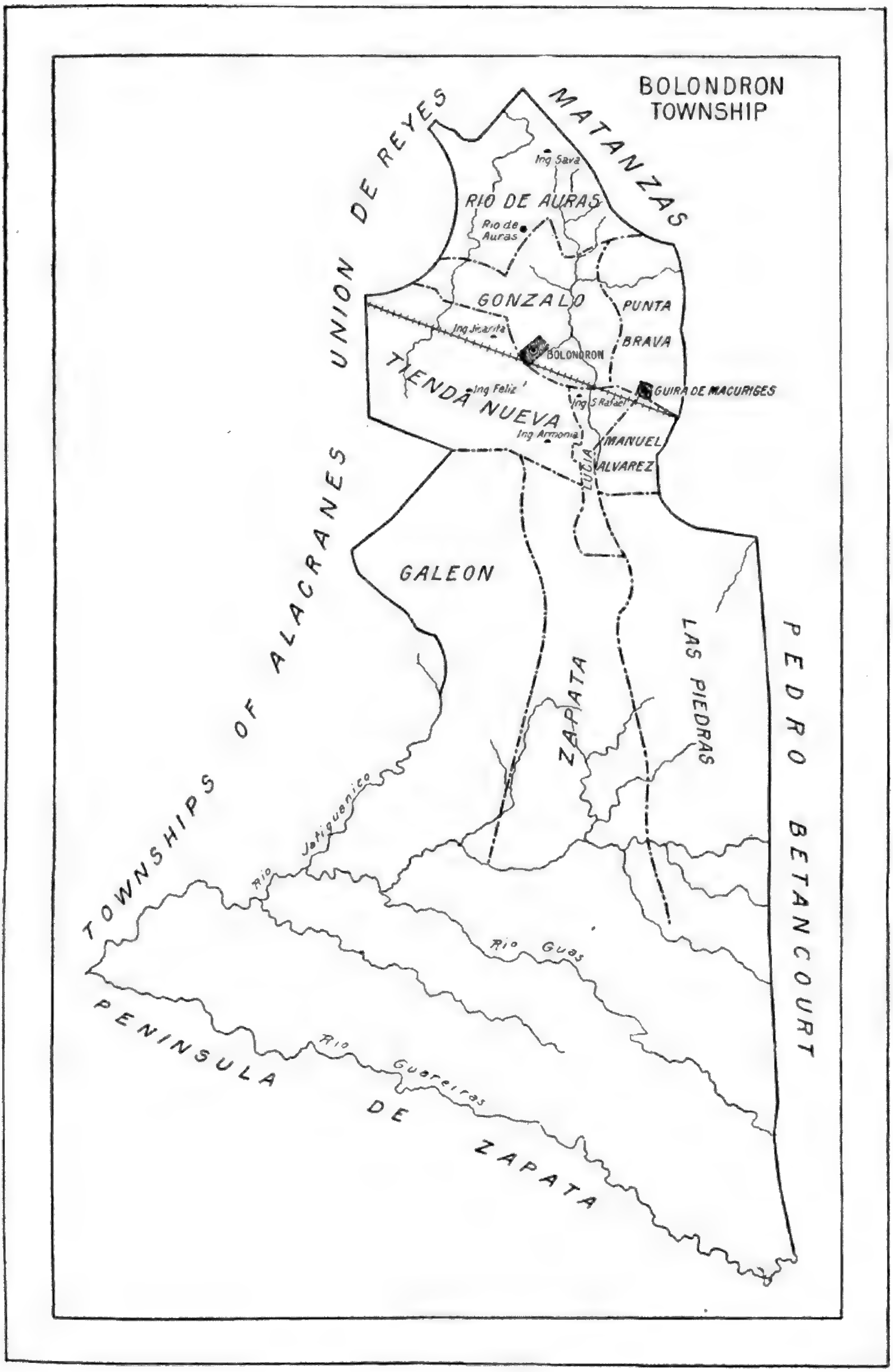
TOWNSHIP OF BOLONDRÓN (CAPITAL, BOLONDRÓN).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Bolondrón	Bolondrón	Urban		2,581
	Galeón	Rural	6.25	1,042
	Gonzalo	do	1.9	943
Güira de Macuriges	Güira de Macuriges	Urban	4	1,253
	Lucía	Rural	3.75	859
	Manuel Álvarez	do	3.9	799
	Piedras, Las	do	10.5	500
	Punta Brava	do	4.4	592
Río de Auras	Río de Auras	do	5	1,219
	Tienda Nueva	do	2.75	1,770
	Zapata	do	11.5	819

Bolondrón.—Barrio and town. Six miles east of Unión de Reyes on the United Railroads of Havana. Entirely dependent on agricultural resources of surrounding country. Has one good machine shop for repairing heavy mill machinery. Population, 2,581. The water supply is obtained from a well which is 120 feet deep. The water is raised by a steam pump, supplemented by a large windmill, to two iron tanks, which have capacity of 1,000 barrels each and are elevated 20 feet above the ground. From these tanks the water is distributed along the principal streets north of the railroad by mains, and these are to be further extended. There are numerous street hydrants and all buildings on piped streets are required to be connected. The water is good and plentiful. It is a public system. The pumping station is near calle Macéo at northern edge of town. The railway company also maintains a pumping station near its passenger depot at the south end of calle Independencia, where there is a steam pump and a 2,000-gallon tank.

There is no sewer system. Some few buildings have been supplied with modern plumbing in connection with cesspools. There is a small electric-light plant, with a capacity of six hundred 16-candlepower lights, near the corner of calles Macéo and Independencia. This system is installed quite generally in the stores and offices, but the streets are lighted by oil lamps.

The ayuntamiento, in the plaza, the Catholic Church on calle Independencia, and the Cuban Club near the plaza are the only public buildings suitable for barracks. These


BOLONDRON TOWNSHIP
MATANZAS
UNION DE REYES
Ing Sava
RIO DE AURAS
Rio de Auras
GONZALO
PUNTA BRAVA
Ing Jicarita
BOLONDRON
TIENDA NUEVA
Ing Feliz
Ing S Rafael
GUIRA DE MACURIGES
Ing Armonia
MANUEL ALVAREZ
LUCIA
GALEON
ZAPATA
LAS PIEDRAS
TOWNSHIPS OF ALACRANES
PEDRO BETANCOURT
Rio Jatiguanico
Rio Guas
Rio Guareiras
PENINSULA DE ZAPATA

three buildings would accommodate 200 men. They are in good repair and sanitary. All are piped for city water.

There are no stables of any size. There are no corrals, but some inclosed yards might be used. There is ample open ground just east of the town near the pumping station which would be suitable.

Any of the buildings mentioned above, and in addition the Episcopal Church at the north end of calle Independencia, would be suitable for a hospital. There are also two large store buildings on calle Independencia—one near Catholic Church and one two blocks south that might be used in an emergency. Both are in good repair and supplied with city water.

Railway station just to west of calle Independencia crossing. Post and telegraph office on calle Independencia about two blocks north of railway. No telephone central.

Best location for camp site is west of town in open fields, adjoining pumping station; space and water for regiment; wood scarce—must be hauled about 5 miles from the swamp, if needed in quantity. These fields are nearly flat but it is believed they will drain themselves.

No defenses. Ruins of about 10 small blockhouses all about the town.

The railway runs nearly east and west near the southern edge of the town. Three side tracks; capacity 100 cars. There are plantation railways to three ingenios; Jicarita, Armonía and San Rafael. Loading and unloading would have to be done through freight house.

Roads lead to Unión; the various ingenios; Limonar via Río de Auras; and Güira. The best approach for an attack would be from the rough country to the north.

Galeón.—Barrio. A section of country containing about 100 fincas. Situated south of Bolondrón. In the barrio are 4 stores and 3 schools. There is no settlement bearing the name.

Gonzalo.—Barrio. Rural district surrounding town of Bolondrón, and extending north and east from that town.

Güira de Macuriges.—Barrio and town. The town is situated 4 miles west of Navajas on the Matanzas branch of the U. H. R. R. and 4.5 miles slightly south of east of Bolondrón. Commonly called Güira. Population, 1,253. Water taken from well and raised to tank by windmill; distributed by pipe line; tank about 100 yards northeast of depot. No sewer system. Town lighted by oil lamps. Wooden school house, 90 by 40 feet, about 300 yards from depot on main street, could be used as barracks; has no lighting facilities, water, or closets; would accommodate about 150 men. Stable for about 8 horses at rural guard quarters. Corral, about 50 yards from depot, suitable for about 40 animals. Stone building on main street, about 400 yards from depot, with water and closets, would serve for hospital; capacity, 20 beds. Storehouse, stone, 40 by 15 feet, near depot, with siding alongside. Telegraph office at depot. Post-office 50 yards east of depot. No camp sites; ground low. There is an old stone blockhouse east of town on railroad track; 18 by 18 feet, 2 feet thick and 25 feet high; in bad repair; capacity about 140 men. Two railroad sidings, about 250 yards each, near depot. Road leaves town from east to Navajas, and from northeast to ingenio Flora.

Lucía.—Barrio. A narrow strip of country southeast of Bolondrón. Contains ingenio San Rafael, 9 fincas, 1 store, and 2 schools. There is no settlement bearing the name.

Manuel Álvarez.—Barrio. A section of country southeast of Bolondrón. Contains ingenio Flora, 15 fincas, 2 stores, and 1 school. The only point in the barrio bearing the name consists of the ruins of an old ingenio.

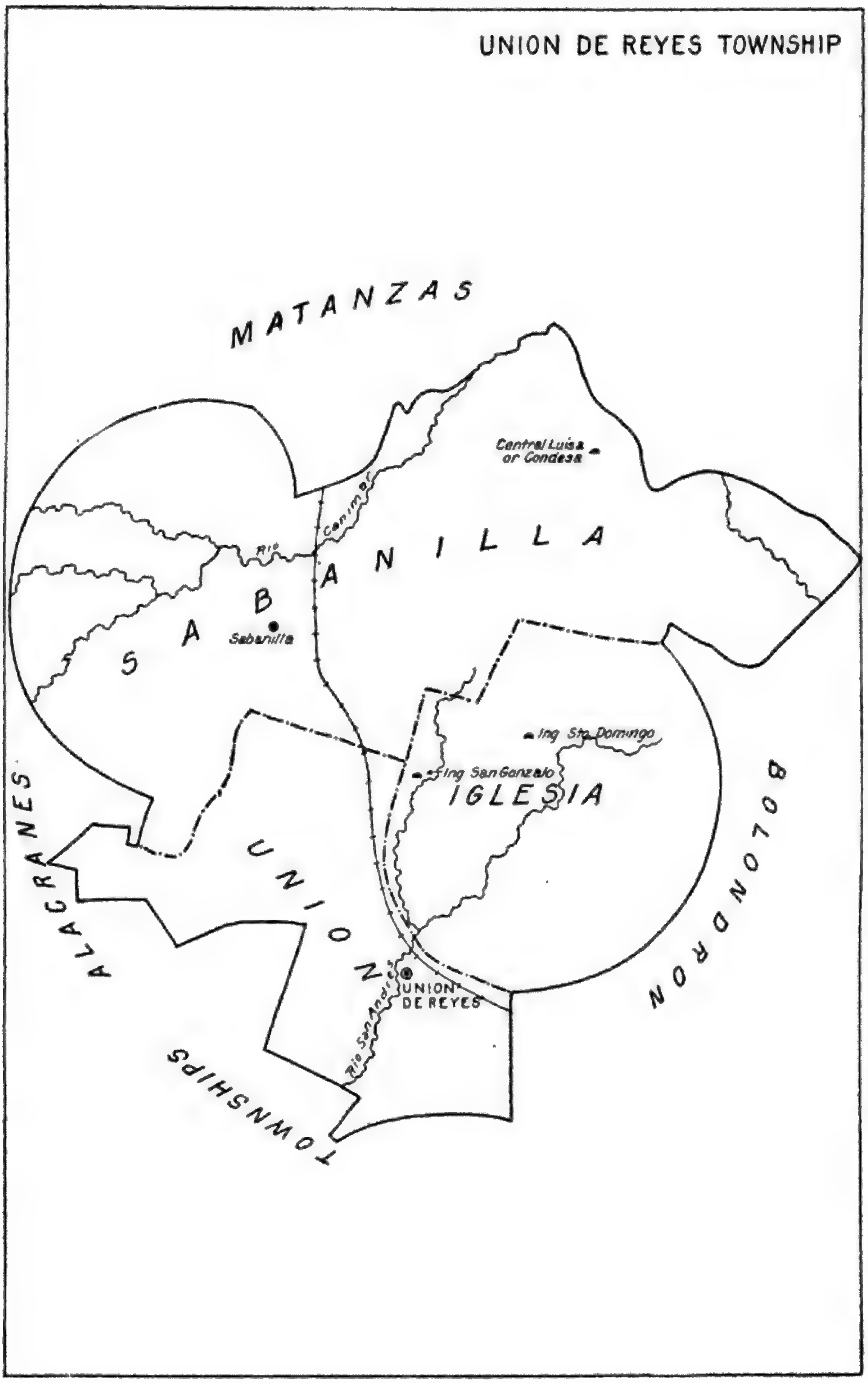
Las Piedras.—Barrio. A section of country southeast of Bolondrón. It contains 26 fincas and 1 store. No point bearing the name.

Punta Brava.—Barrio. A section of country northeast of Bolondrón. It contains 19 fincas, 2 stores, and 1 school. No settlement bearing the name.

Río de Auras.—Barrio and sitio. Ingenio Saratoga is in the barrio. The sitio is 5 miles north of Bolondrón and consists of but 1 house.

Tienda Nueva.—Barrio. A rural district south and west of Bolondrón, and contains the ingenios Armonía, Feliz, and Jicarita.

Zapata.—Barrio. A section of country containing 100 fincas. It has 3 stores and 3 schools. No settlement bearing the name, which is taken from the Gran Ciénaga de Zapata, the southern boundary of the barrio.


UNION DE REYES TOWNSHIP
MATANZAS
SABANILLA
Rio Canimar
Central Luisa or Condesa
Sabanilla
Ing Sta Domingo
Ing San Gonzalo
IGLESIA
UNION
UNION DE REYES
Rio San Andres
ALACRANES
TOWNSHIPS
BOLONDRON

TOWNSHIP OF UNIÓN DE REYES (CAPITAL, UNIÓN DE REYES).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Unión de Reyes	Unión	Rural		4,088
	Iglesia	do	2.7	1,731
Sabanilla	Sabanilla	do	5	5,383

Unión de Reyes.—Town. Situated in the barrio Unión about 18 miles south of Matanzas, on line of United Railroads of Havana via Güines; on branch from Matanzas, of the old Matanzas Railway Company (now property of the United. Also terminus of branches to Alacranes and Cabezas. A railroad center of some importance; has two foundries and machine shops, where repairing of heavy sugar-mill machinery is done.

Population, 3,941.

No water system. Depends on about six private wells, most of which go dry during a protracted drought. Principal supply is obtained from a well (Pozo de la Señora) on the southwestern edge of town. Water is peddled about in carts.

No sewer system. The streets are lighted by oil lamps. There are many private acetylene gas plants in stores and residences.

Barracks: The ayuntamiento building will hold 200 men and has stables for 100 horses. The barracks of the rural guard will hold 100 men and has stables for 25 horses. The Catholic Church will hold 100 men. All these buildings are in good repair, but have no sanitary arrangements. The ayuntamiento and the barracks each have a well, though it is doubtful if they would supply enough water for a full complement of troops. The casino and church would have to draw on the public well.

Stables at ayuntamiento and barracks are the only ones of consequence.

No corrals. There are a number of yards and vacant lots surrounded by stone walls that might be used. There is open ground in almost every direction, but the scarcity of water renders any, except one location to the southwest, unsuitable.

No hospitals. Either the Spanish casino or the church would provide suitable accommodations.

There are 2 excellent freight houses, each about 24 by 100 feet, near the railroad station. They have tracks on both sides and are in every way suitable for storehouses.

Railroad station is near where calle Asunción crosses the railroad. The post and telegraph offices are on calle Virtudes, one-half block south of the plaza. There is no telephone exchange.

The scarcity of water makes a camp in this vicinity almost impossible. Probably a battalion could camp just to the east of the Alacranes branch railroad, on the south edge of the town; young cane and grass plentiful; wood scarce; would have to be hauled several miles.

There are 5 small stone blockhouses about the perimeter of the town. They are about 12 by 12 feet, loopholed, and probably were occupied by a squad. All are partly in ruins.

The railroad lines from Güines, Matanzas, and Cabezas unite before entering the town and run along its northeast edge in a northwest-southeast direction. Most of the sidings are here, and they will hold about 150 cars. The Alacranes branch runs along the western edge and has a siding that will hold 25 cars. There is a ramp of concrete and earth in the yards. Facilities for loading and unloading at the freight station are excellent.

Roads lead to Alacranes, ingenio Conchita, Sabanilla, Bermeja, ingenio Valiente, and Bolondrón. Best line of approach for an attack would be from the west.

Iglesia.—Barrio. A rural district lying northeast of Unión de Reyes and adjoining the barrio of Unión. It contains the ingenios San Gonzálo (Majagua) and Santo Domingo.

Sabanilla.—Barrio and village. Central Luisa (Condesa) is situated in the barrio. The village is 14 miles south of Matanzas, on the railroad from Matanzas to Unión de Reyes, and is 5 miles north of the latter place. It is an unimportant country village and dependent on the agricultural resources of the surrounding country. One small brickyard and the manufacture of acetylene gas machines for local use seem to be the only industries.

Population about 950.

Water supply: Village supplied from wells of which there are several. The railway maintains a pumping station and supplies its engines from a 2,000-gallon tank. Water not very good, though quantity is ample. This station and tank are near calle Martí, on the eastern edge of village.

The plaza is lighted by acetylene gas. Streets sparsely lighted by oil lamps.

There are perhaps 6 buildings on calles Martí and Macéo, within three blocks of the railway station, that might be used in an emergency to quarter troops. These buildings, now used for stores and residences, are about as sanitary as Cuban buildings in a village of this size usually are. They are in a fair state of repair. Water is obtained from private wells and is not good, although plentiful.

There are no important stables.

There are no corrals. Ample open ground for transportation corrals or picket lines, to west of village. Water could be obtained from the railway well and tank.

No hospital. The church, on the plaza, would be best place for hospital; is clean, sanitary, and in good repair.

The freight station, a stone building 25 by 100 feet, with sidetracks on both sides, would make a good storehouse. Stock could be unloaded through the building.

Railway station is near where calle Martí crosses track. Telegraph office at station. No telephone central. Post-office at No. 25 calle Martí, about two blocks west of the station.

Camp site: Immediately west of the town is an open pasture; wood scarce; water would have to be obtained from railway well and tank; grazing good. This field is flat, but is as good as any ground in the vicinity.

No defenses.

Railroad sidings at station. There are four sidetracks; capacity 100 cars. Supplies could be easily handled at freight house.

Roads lead south to Unión and Alacranes, north to Cidra, east to ingenio Santo Domingo, and west to Carmen.

Perfectly flat country. Hills 1 mile to south would afford best opportunity for approach for attack.

JUDICIAL DISTRICT OF CÁRDENAS.

Township:	Population.
Cárdenas	28,576
Jovellanos	17,024
Martí (Hato Nuevo)	15,104

TOWNSHIP OF CÁRDENAS (CAPITAL, CÁRDENAS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Cárdenas	Cárdenas	Urban		24,201
Cantel	Cantel	Rural	8.5	621
Lagunillas	Lagunillas	do	6	1,522
Varadero Guásimas. Cervantes. Siguapa.	Varadero-Camacho-Guásimas	do	11	2,153

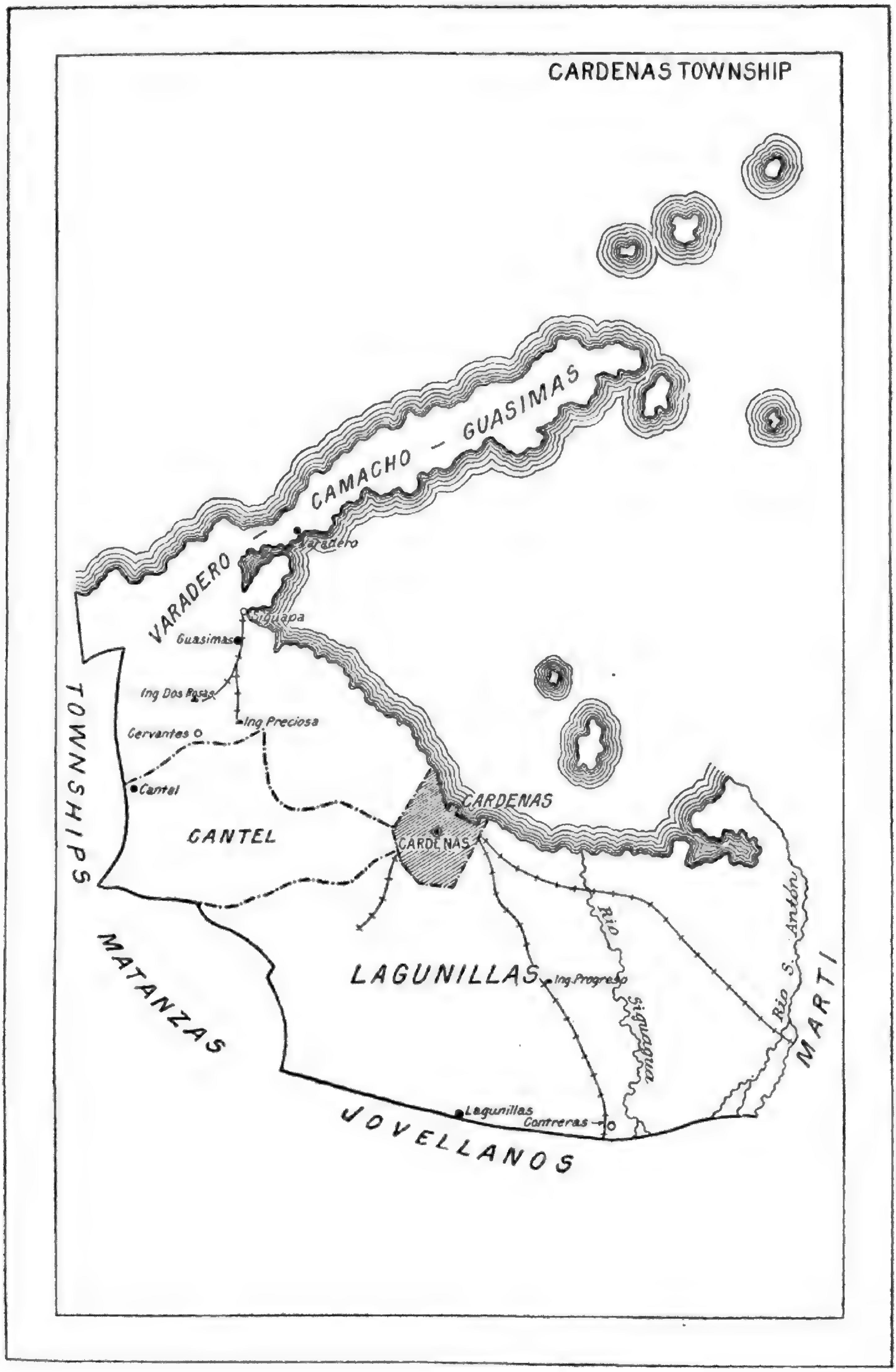
Cárdenas.—Barrio and town. The town is the center of the municipal and of the judicial district of the same name and is situated on the Bay of Cárdenas, which indents the northern coast of Cuba just east of the Peninsula of Hicacos.

Within the province it is in importance second only to Matanzas, the capital, from which it is distant about 31 miles. It is 79 miles from Havana. These distances are by the high road; by rail they are 64 and 114 miles, respectively. With both of these cities it is connected by water, as well as by rail.

The city runs 26 blocks southwest from the bay and 27 blocks from southeast to northwest; this is its extreme length and breadth. It is not built up entirely within this area, nor are all the streets cut through to form a rectangle. The town site rises slightly from the bay. The portion lying north of the Plaza de Colón, which has been filled in since about 1850, is low, the flanks toward the bay being swampy and subject to overflow during heavy and prolonged rains. The seashore is given up almost entirely to warehouses and a few bathing establishments.

Of the buildings in town, 1,932 are constructed of stone and cement or mampostería, and 1,765 of wood. Only a few of them have second floors.

The principal industries are tanning, manufacture of sugar products, hemp, and artificial ice, sugar refining, and foundry work. There are 5 tanneries, 2 distilleries, 2 hemp


CARDENAS TOWNSHIP
VARADERO — CAMACHO — GUASIMAS
Varadero
Siguapa
Guasimas
Ing Dos Rosas
Ing Preciosa
Cervantes
Cantel
CANTEL
CARDENAS
CARDENAS
LAGUNILLAS
Ing. Progreso
Rio Siguagua
Rio S. Antón
MARTI
TOWNSHIPS
MATANZAS
Lagunillas
Contreras
JOVELLANOS

mills, 2 ice plants, 2 sugar refineries (1 not in operation), and 3 foundries.

In addition, there are 17 small tobacco factories, 3 soda-water works, 2 construction companies, 2 companies building small wooden vessels, 10 bakeries, and 8 drug stores. There is a city dispensary, where medicines are given free to the poor.

The following is a list of the principal public buildings:

City hall, Plaza.
Public market, Twelfth street, between Third and Fifth avenues.
Asylum for old people, Thirteenth street and Ninth avenue.
Llaca school (public), Independencia and Sixteenth streets.
City jail, Thirteenth street, between Eleventh and Thirteenth avenues.
Civil hospital, Twelfth and Thirteenth streets, Seventeenth and Nineteenth avenues.
Fire department, Twelfth street and Sixth avenue.
Cuartel, Eighteenth and Nineteenth streets, Fourth and Sixth avenues.
"Otero" Theater, Tenth street and Second avenue.
Slaughterhouse, 1 mile south of city (Fifth avenue).

The census of 1907 gives a population to the city proper of 24,280.

Water supply: Obtained from what is supposed to be an underground river at a point just outside the city limits. The water is of good quantity and quality, but is decidedly hard. It is pumped up from a depth of 23 feet below the surface of the ground from natural caves. There is an up-to-date pump, and two old ones which are to be held in reserve. The water is forced into a cement tank about 45 feet high, having a capacity of 100,000 gallons. The supply has been in use for over thirty years and shows no evidence of decrease. The waterworks are owned by a corporation.

Sewerage: The Maura system is used in about one-quarter of the private residences. For the city in general, at certain low places on corners' holes are bored into the cavities in the rock through which the water filters away. This system carries away the surface water at all times.

Barracks: The buildings most suitable for quartering troops are in the order named: The cuartel, in southern part of city and fronting on a public square; built of cement; has modern closets, shower baths, and electric lights; has offices and large parade in the center (interior court); suitable for a battalion of infantry. The quintas, or summer residences, 5 in number, situated at the southern end of the Avenida de la Independencia, will each accommodate 65 men; city water and electric light. The city hall would accommodate 300 men; is built of stone; has city water and electric light. The city jail has two stories; is built of stone; has city water and electric light and good closets; would accommodate 65 men.

Other available buildings are: The fire department house, the Spanish Casino, and the Cárdenas Club, all two-story buildings built of stone, equipped with electric lights, city water, and modern closets, and having capacity of 100, 200, and 150 men, respectively. The Protestant school, which is built of wood, has same sanitary advantages as preceding buildings, and would accommodate about 150 men. The sugar warehouses are constructed of wood, as a rule, though some are of stone. The average warehouse is suitable for 400 men, and in all of them together there is sufficient space to quarter 2 regiments.

Stables: The principal ones in the city are situated as follows:

Fifth avenue, between Twelfth and Thirteenth streets, 16 animals.
Thirteenth street, between Second and Fourth avenues, 43 animals.
Sixth avenue, between Fifteenth and Sixteenth streets, 28 animals.
Twelfth avenue, between Thirteenth and Fourteenth streets, 12 animals.
Thirteenth street and Fifth avenue, 5 animals.
Twelfth street, between Nineteenth and Twenty-first avenues, 16 animals.
Ninth street, between Seventh and Ninth avenues, 18 animals.
Thirteenth avenue, between Fourteenth and Fifteenth streets, 13 animals.

Transportation corrals: One was constructed during the second intervention, one block southwest of the cuartel, and could be made to accommodate, if necessary, 250 animals. Water is piped to it.

Hospitals: The civil hospital (Santa Isabel) covers about three-fourths of an acre of ground and has 184 beds. The building used as a military hospital during the second intervention is a two-story house on East Twelfth street, near the city hall, and is well adapted for its purpose. Larger and better buildings, which could be used as hospitals in case of military necessity, are the "Quintas," already mentioned; each would accommodate about 50 beds.

Quartermaster and commissary storehouses: Five warehouses near the railroad station. These buildings are especially adapted for this purpose, on account of their capacity and location. They are rectangular buildings, one and one-half stories high, and cover an average superficial area of 500 square feet. Railroad switches run to each of them from the general station, from which they are only from one to four blocks distant. They have no unloading platforms; flat cars are used. They are near the railroad station and the shipping wharves.

The railroad station (terminus of the C. and J. branch of the U. H. R. R.) has its entrance at Fifth street and Eighth avenue. The main shed would bivouac a battalion of infantry, and the three buildings attached to the station would quarter a regiment.

Location of important offices: The post-office is in a rented building on the corner of Ninth street and First avenue, facing the Plaza de Colón. The telegraph office is on Independencia avenue, between Seventh and Eighth streets. The telephone office is on Eighth street, near First avenue. All are in close proximity to each other.

Ice factories: The old plant of Vila y Hermano is on the bay, at the foot of Fourteenth avenue. The Cárdenas Ice Company is near the city waterworks.

Camp site: At the head of the Avenida de la Independencia (popularly known by its former name of Calle Real), at Nineteenth street, is a good camp site, sufficiently large for two regiments, or 2,000 men. The soil is a red clay, with some sand and rock, and is partly covered with grass. This location is about 1,000 yards from the city waterworks, and a water main passes along the avenue on the east side. On the west side is an excellent macadam road to the slaughterhouse. The drainage is good. A railroad runs along the west side of the site within 400 yards. Wood is easily obtained and there is good grazing within a mile.

Defenses: In Spanish times there was a line of defense about 5 miles in length, extending around three sides of the town from the swamps on either flank. It was a continuous stone wall, about 4½ feet high and 2 feet thick. In front of this wall was a ditch about 30 feet wide and 20 feet deep, and in front of this ditch a wire entanglement. Parts of this wall still remain, but the ditch has been filled in. Along the line of defenses were 5 permanent blockhouses, and 3 others converted from buildings existing on the line. Of these blockhouses, 3 of the permanent ones still remain and are yet in good condition; they are square, about 30 feet high and 2 feet thick. They are situated at the three entrances to the town marked by the ends of Thirteenth and Fourteenth streets and the Avenida de la Independencia, respectively. There is no commanding ground near the city within effective rifle range, but 3 miles to the south there is a range of small hills that commands a view of the entire terrain as far as Cárdenas, and which could be used by artillery against the town itself.

Railroad facilities: The railroad station is quite large. In addition, the yards are about the largest in the island, so that there are ample facilities for entraining and detraining. The switches running to the warehouses along the bay and the spur running out to the quarries would facilitate the unloading and loading of supplies in those parts of the city where this work would probably be required.

Roads leading out of town: There are four principal roads; two from the western edge to Camarioca, Siguapa, and Varadero; one from the eastern edge to ingenio Progreso; and one from the southern edge to Lagunillas and Cimarrones.

To attack the town the best line of approach would be from the south, on account of the swamps and the bay on the other sides. Also, the ground to the south has a slight command over the city, but principally at very long range.

Cantel.—Barrio and village. The village is 8½ miles northwest of Cárdenas on a hill about 60 feet high; population, about 40. Consists of a group of 10 wooden houses. Water is obtained from wells and is of good quality. The village occupies an excellent defensive position, provided the adjoining hilltops can be held. From the hill a good view can be obtained of the country to the north.

Lagunillas.—Barrio and village. The barrio is south of Cárdenas, and contains the village of the same name, ingenio Progreso, and 117 very small rural fincas. The village of Lagunillas is 6 miles from Cárdenas and consists of 79 houses and a store.

Varadero - Camacho - Guásimas. — Barrio. An extensive area lying northwest and north of Cárdenas. About one-half of its area is on the Hicacos Peninsula, the soil of which is sand and of little value for cultivation. The coast is all sand beach. Near the extreme end of the peninsula, at a place called Salinas, is a salt works and a wharf about 250 feet long by 6 feet wide with 7 feet of water. The salt works are connected with Cárdenas by telephone. Near the land end of the peninsula is the summer resort Varadero. The portion of the barrio not on the peninsula is a low, rich sugar district which contains the ingenios Dos Rosas and Preciosa, the village of Guásimas, and the sitios Siguapa and Cervantes.

Varadero.—Village. Situated 11 miles from Cárdenas on the narrow neck of the peninsula of Hicacos, and is a summer resort for people in Cárdenas and Havana. Few mosquitoes. Water obtained from cisterns and wells, but that from the latter is apt to be salty. Soil of the peninsula is sandy. There are about 40 large frame residences. These could quarter 1,500 men. Has a wharf in excellent condition, and track and hand car to handle freight.

Guásimas.—Village. About 7½ miles northwest of Cárdenas, and contains 10 to 15 houses.

Cervantes.—A colonia of central Preciosa and situated about 7½ miles, by road, northwest of Cárdenas. Was once a large plantation and did its own grinding, but was burned during an insurrection. The dwelling house is on the top of a gentle rise, 85 feet above the sea level. It is built of wood and has a tile roof; capacity, 50 men. From this house the terrain falls in all directions like a glacis. An excellent artillery position, commanding all country within range to north, east, and west. The cane would prevent cavalry operations. Water is brought in a 3-inch pipe from a well 600 yards away and carried into a tank which supplies the house.

Siguapa.—Sitio. Shipping point of country about Dos Rosas and Preciosa. Situated on low, swampy land. It is the end of the narrow-gauge road from Preciosa. The road runs out on two wharves. There are 2 warehouses; both are built of stone and have tile roofs. The old one will accommodate 100 men; new one, 200 men. Water obtained from cistern and well. One-half mile away is an excellent quarry of building stone.

TOWNSHIP OF JOVELLANOS (BEMBA) (CAPITAL, JOVELLANOS (BEMBA)).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital. *Miles.*	Population.
Jovellanos (Bemba) Rosita.	Asunción	Rural and urban.	....	4,685
Carlos Rojas or Cimarrones.	Carlos Rojas	...do	4.5	2,544
Coliseo	Coliseo	Rural	11.2	1,806
Isabel	Isabel	...do	6.7	615
	Realengo	...do	4.5	598
San Joaquín	San Joaquín	...do	7.5	1,010
San José	San José	Rural and urban.	6.5	4,561
Tosca	Tosca	Rural	8.7	886
	Toscano	...do	5.2	319

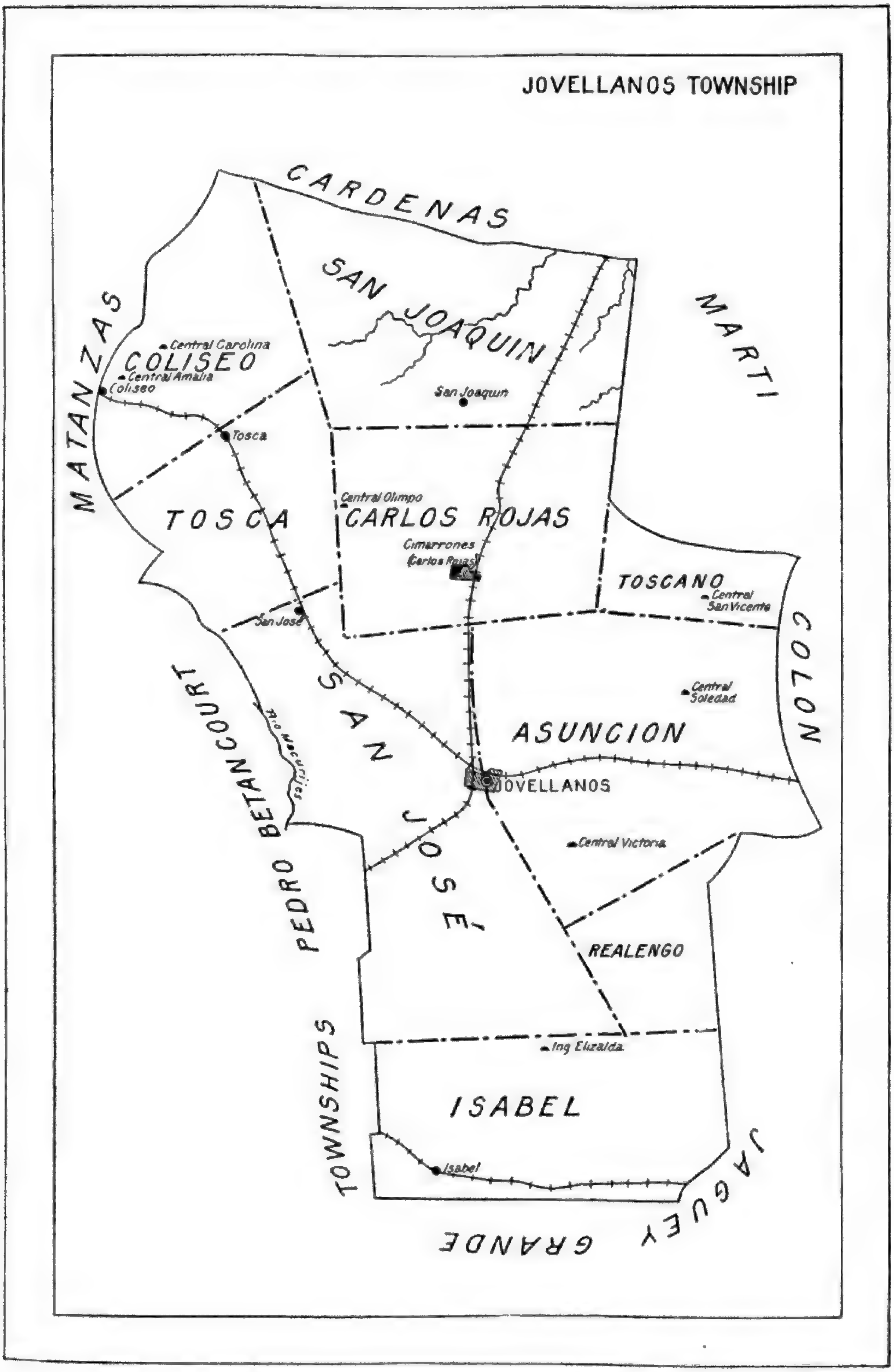
Jovellanos.—Town. The town is situated 15 miles south of Cárdenas, on the Cárdenas and Júcaro Railroad and United Railroads of Havana. Part of the town is in the barrio of Asunción and part in the barrio of San José. The industries are largely in the hands of Spaniards. There are 2 large carpenter shops where plantation carts are made and an excellent machine shop and foundry where sugar machinery is repaired and where in emergency railroad repairing can be done. There is also a boiler factory.

Population, 9,246.

Water is obtained from a large well 100 feet deep, situated in the center of town; water raised by steam pump to large iron tank from which distributed; quality good, quantity sufficient.

No sewer system. There is a gas plant on the southeast edge of town, but gas is so poor that acetylene gas is generally used.

In the town are 851 houses, 150 of which are constructed of stone. The following buildings would shelter troops: City hall, stone, one floor, city water, acetylene gas, poor



JOVELLANOS TOWNSHIP

closets; would shelter 100 men; on Máximo Gómez street. Spanish Club, stone, second floor, acetylene gas, city water, modern closets.

There is a stable for 16 horses one block south of depot on calle San José. At the rural guard quarters on Máximo Gómez street is stable room for 6 horses. On the west side of town is a field inclosed by a hedge; would make a corral for about 50 animals.

There are two buildings suitable for storehouses, viz, freight shed east of depot, stone, 250 by 30 feet, with railroad siding alongside; wooden building on west side of depot, 150 by 30 feet, with siding alongside. There is about 600 yards of railroad siding.

There is a stone building which was used as a hospital; has city water and modern plumbing.

Railroad station is in northeast part of town; wood, 250 by 30 feet, covered. Post-office, McKinley street, 1½ blocks west of depot. Telegraph office, Máximo Gómez street. Telephone in railroad station and in telegraph office.

On west side of railroad track, 300 yards northwest of depot, there is a level piece of land suitable for camp of about 800 men; city water can be tapped; wood scarce. West of town near cemetery is suitable ground for 1,000 men; water would have to be brought 1,000 yards from city well.

Roads lead out of town west to Nueva Luisa, north to Carlos Rojas, south to Isabel, and east to Recreo.

Town is situated in level country and was formerly protected by an infantry trench. The west and south sides of town are somewhat protected by an arroyo. On the west side is the cemetery; it is about 300 yards square and situated on a slight rise of ground.

Asunción.—Barrio. The barrio of this name includes (*a*) urban portion—part of the town of Jovellanos east of the railroad track; (*b*) rural portion—centrals Soledad and Victoria, 34 small fincas, and the sitio Rosita. Total area of the barrio is about 14 square miles.

Rosita.—Sitio. A small cluster of shacks situated 4 miles south of Jovellanos. It is the end of the branch line of the U. H. R. R. from Isabel to Rosita.

Carlos Rojas (*Cimarrones*).—Barrio and town. The barrio includes, (*a*) urban portion—town of same name; (*b*) rural portion—central Olimpo and 39 small fincas. Total area of barrio about 6 square miles.

The town is 4½ miles north of Jovellanos on Cárdenas and Júcaro branch of the U. H. R. R. Principal industry, sugar. Population, 1,635.

Water supply from wells. These are very numerous—about 35. The water is good, coming from subterranean streams, and the supply is abundant. There is no sewer system. The general method of lighting is by oil lamps, but the stores have their individual private acetylene plants.

There are no barracks, but in case of emergency the following buildings would be available: Freight house, capacity 2½ companies; railroad station, capacity 1 company; church, capacity 1½ companies. There are also 2 school buildings and 3 private houses that would be serviceable if necessary, total capacity being about 2 companies. One of the school buildings is of wood; the other one is part wood and part mampostería. The other buildings mentioned are of mampostería, and include about all of such buildings in the town. All the buildings described, although having no modern improvements, would be sanitary, or could easily be made so.

There is, adjacent to the railroad station, an inclosure with an area of about 1 acre and surrounded by a stonewall from 10 to 12 feet high, and 2 feet thick; could be used for a transportation corral. To this inclosure there are 2 gates, 1 on either side of the station, and sufficiently wide for the passage of army wagons. There would also be available for the construction of a corral the level ground in front of the station; has an area of about 2 acres, and a good well centrally situated. Besides this well, there are others in private yards near by.

The railroad station and freight house referred to above would serve as storehouses. Near by there are four sidings and a platform. The railroad station and telegraph office (railroad) are at the southeast corner of the town, and the post-office is near the church.

The only camp site is the ground mentioned as suitable for a corral. Here, in the dry season, there is wood, water, and sufficient space for a battalion. The disadvantages are low ground and no grass near at hand.

A blockhouse at the southwest corner of the town, on the road to Olimpo, has one floor (proper) and a superior gallery, affording in all two tiers of loopholes and accommodation for 30 men.

The railroad referred to is a single-track road, and the sidings are only as long as the station, with the exception of one, about 125 yards longer, which is, in reality, a spur running to Olimpo. It runs parallel to and alongside the main track for the distance mentioned. For loading purposes there is a permanent ramp, about 30 feet wide, just north of the station.

There are four principal roads leading from the town, viz: One north to Lagunillas; one east to Máximo Gómez (Recreo); one south to Jovellanos; and one west to Coliseo, through Olimpo.

The most difficult portion of the town to defend would be the northern edge.

Coliseo.—Barrio and village. The barrio contains centrals Carolina and Santa Amalia. The village is a shipping point on United Railroads of Havana, about 11.2 miles northwest of Jovellanos; to the south and west are wooded hills about 150 feet high. In 1896 an important engagement took place at this point between the Spanish forces commanded by General Campos and Cuban forces commanded by General Gómez. After the battle the village was burned by the Spanish forces, and has never since reached its former importance. Sugar is the only industry. Population, about 600.

Water is obtained from a large well situated in the southeast portion of the village. Water raised by hand and sold from carts. The railroad company obtains water from a deep well east of the station; water raised by steam pump. No sewer system. Streets lighted by oil lamps.

There are about 20 buildings, 3 of which are stone and suitable for quarters for troops. One is situated south of the center of the village and is occupied by the rural guard. The other two are on the eastern side of the village and now used as stores. These 3 buildings are in bad sanitary condition; no water, lights, or modern closets; would accommodate in all about 125 men.

No stables. No corral, though there are yards that could be used. No building suitable for hospital. There are 4 small wooden houses suitable for storehouses. Telephone and telegraph offices in railroad station. Telephone connection with ingenio Santa Amalia, ingenio Carolina, railroad station at La Tosca and Sumidero, village of Limonar, and colonia Descanso.

The ground is low and badly drained. No good grazing; limited amount of wood; no camp recommended. There is one small, stone Spanish blockhouse, northwest of railroad sidings, suitable for 10 men.

No facilities at railroad for unloading. Standard-gauge branch leaves village, running northeast to ingenio Santa Amalia. Standard-gauge road from Coliseo runs northwest to La Julia (Triunfo).

The village is surounded by cane fields on north and east. High hills are on the west and south. On the west, where the railroad passes, there is an opening into the valley of Sumidero.

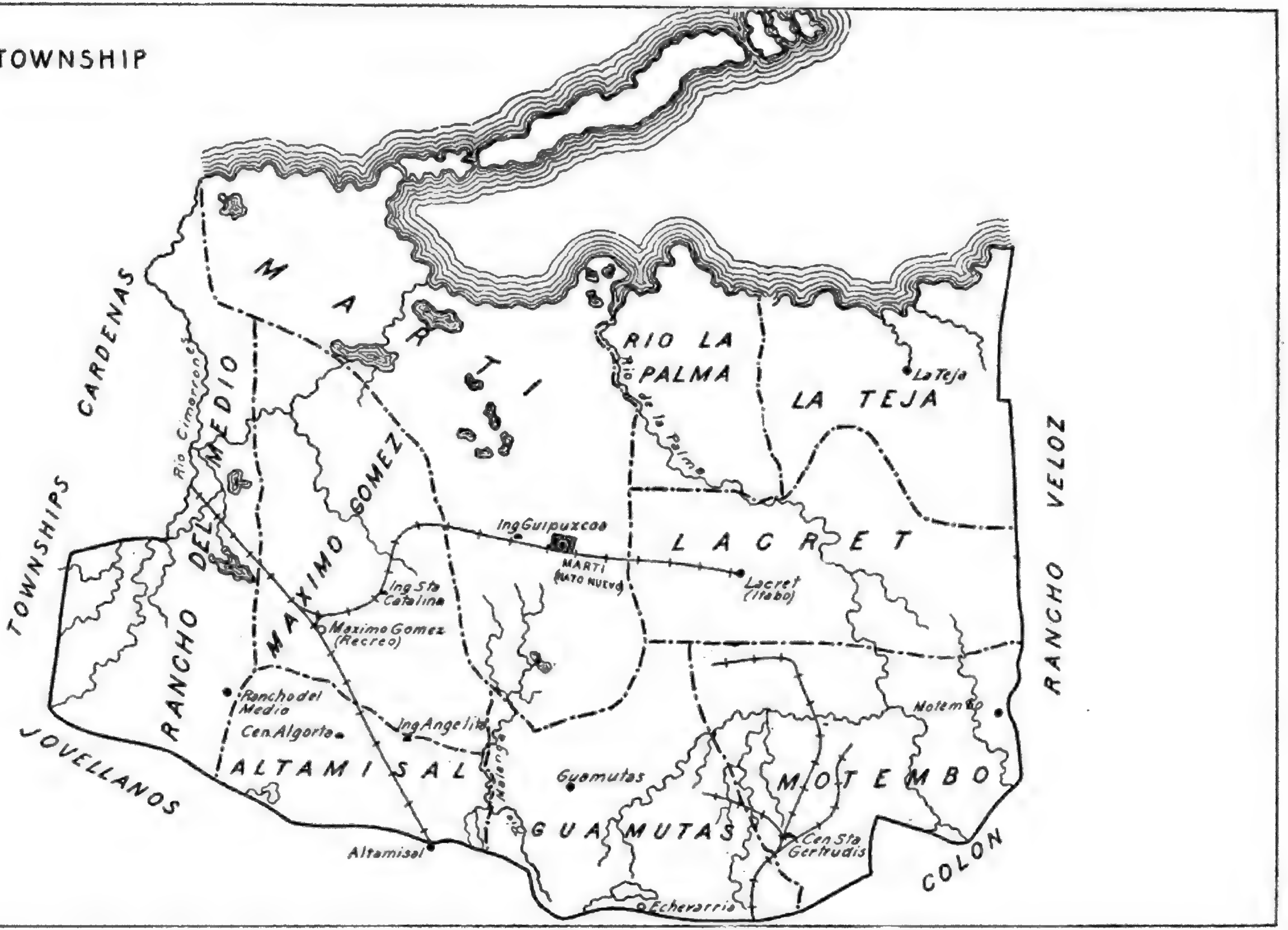
Isabel.—Barrio and village. Ingenio Elizalde is situated within the barrio. The village is a small railroad station about 7 miles by road south of Jovellanos. It consists of a cluster of small, poorly built, wooden houses. The railroad station is built of stone, 50 by 20 feet, and one story high. There is no water tank and no siding. Population, about 50. The village is divided by the boundary line between the municipalities of Jovellanos and Pedro Betancourt, only 4 houses and the schoolhouse being in the municipality of Pedro Betancourt.

Realengo.—Barrio. A rural district containing 38 very small fincas. There is a schoolhouse at the finca San Carlos. Total area of barrio, about 1 square mile.

San Joaquín.—Barrio and village. A rural district having 49 fincas. The settlement bearing the name is 7½ miles by direct road due north of Jovellanos and contains 6 buildings, one of which is a school and one a store. The total area of the barrio is about 18 square miles.

San José.—Barrio and sitio. The barrio is a rural district containing part of the town of Jovellanos and the sitio of San José. The sitio is a railroad station, 6½ miles northwest of Jovellanos on the United Railroads of Havana and is 4 miles from Carlos Rojas, with which place it is connected by road. It is an important cattle shipping point. The

MARTI TOWNSHIP



railroad station is a wooden building and there is a cattle corral and permanent loading ramp. Water obtained from a well which contains good water. Five hundred yards of railroad siding.

Tosca.—Barrio and village. The village is a railroad station on the United Railroads of Havana about 8.7 miles northwest of Jovellanos. It consists of a railroad station (2 stone buildings) and about 13 frame houses. Water supply obtained from wells; quality, excellent. Telephone and telegraph connection with Jovellanos and Coliseo. Single-track standard-gauge railroad spur to finca San Fernando and San Juan; has telephone line. Railroad siding of 300 yards.

Toscano.—Barrio. A rural district containing 15 very small fincas, one of which is a sugar colonia of the same name, and central San Vicente. Total area of barrio about 10 square miles.

TOWNSHIP OF MARTÍ (HATO NUEVO) (CAPITAL, MARTÍ (HATO NUEVO)).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Martí or Hato Nuevo	Martí	Rural and urban.		2,907
	Altamisal	Rural	8.7	986
Guamutas	Guamutas	do	7.5	1,683
Lacret or Itabo	Lacret	do	4.5	1,141
Máximo Gómez or Recreo	Máximo Gómez	do	10	3,710
Motembo	Motembo	do	15	2,868
Rancho del Medio	Rancho del Medio	do	16	1,079
La Carolina.				
San Nicolás.				
	Río de la Palma	do	6	363
La Teja	Teja (La)	do	12	367

Martí (Hato Neuvo).—Barrio and town. Ingenio Guipúzcoa is situated within the barrio. The town is on the railroad between Itabo (Lacret) and Recreo (Máximo Gómez). Population, about 800. Water obtained from numerous wells; quality good. There are about 50 good houses in the town. One side track at the railroad station. Telegraphic communication. There is a small railroad repair shop in the town.

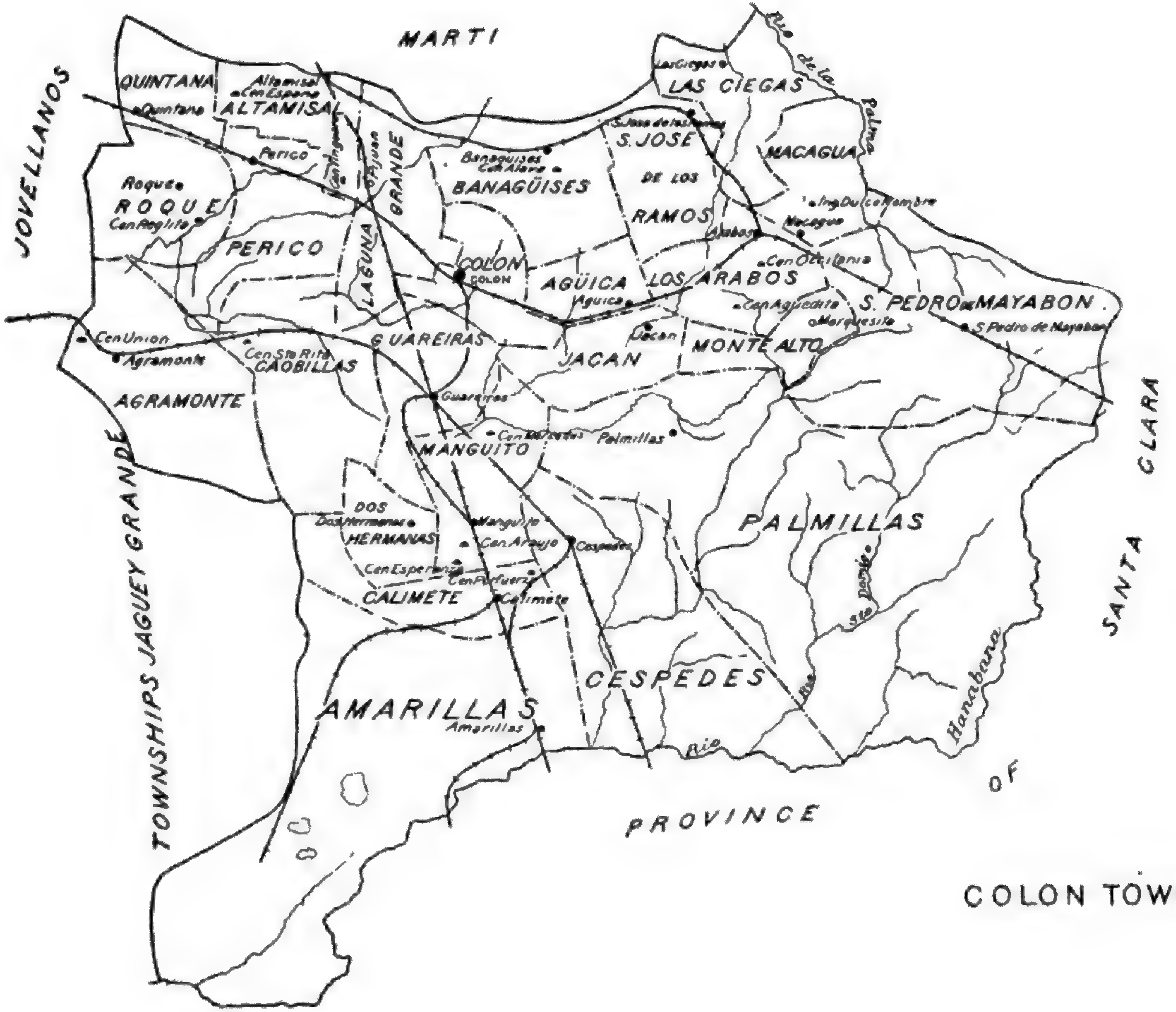
Altamisal.—Barrio. A rural district lying southeast of Martí. It is just north of the barrio Altamisal, in the municipality of Colón, and contains two sugar mills, viz, ingenio Angelita and central Algorta. The village of Altamisal, with the exception of a few outlying houses, is in the barrio of Altamisal, municipality of Colón.

Guamutas.—Barrio and sitio. The settlement called Guamutas is 7½ miles south of Martí and was formerly a village of about 40 houses, but it was burned in 1897, and there remain at present only one house, a ruined church, and a cemetery.

Lacret.—Barrio and village. The village is also called Itabo. It is on the Río de la Palma, and on the United Railroads of Havana, 4½ miles east of Martí. Population, 350. It consists of 45 frame houses and a number of shacks, and has a post-office, hotel, and some stores. The railroad storehouse and schoolhouse would shelter about 300 men. The railroad has a small siding. A wooden bridge spans the Palma River. Town was burned by Spaniards in 1896.

Máximo Gómez.—Barrio and town. The barrio contains ingenio Santa Catalina. The town is also called Recreo and is on a branch of the Cárdenas and Júcaro division of the United Railroads of Havana, 10 miles southwest of Martí. It is also the point from which a branch of the same railroad runs to Lacret (Itabo). The town is frequently flooded during the inundations of the El Roque district. As a consequence sanitary conditions are bad and there is much fever. Principal industries are the raising of sugar cane and cattle. Population, 1,708. Water is obtained from wells and is not considered good. There are in town about 328 houses, of which 7 are constructed of stone. At the railroad depot is a small corral, which holds about 50 animals. Telephone and telegraph at railroad station. The station is stone and alongside there is a stone warehouse; dimensions 36 by 150 feet. Two standard-gauge sidings of about 400 yards each and a **Y**. There are also two large iron water tanks, to which water is raised by steam pump. The best direction to approach the town for attack is from the south or southwest.

Motembo.—Barrio and sitio. The barrio contains central Santa Gertrudis, about 15 farms, and the sitio of the same name. The sitio is 15 miles southeast of Martí and consists of about 4 houses and 2 oil wells. One of these wells is being operated.



COLON TOWNSHIP

Rancho del Medio.—Barrio and sitio. Besides the sitio of the same name the barrio contains the sitios of La Carolina and San Nicolás. The sitio of Rancho del Medio is 16 miles by road southwest of Martí and consists of 3 or 4 houses.

La Carolina.—Sitio. A small settlement of 5 houses on the Carolina road.

San Nicolás.—Sitio. A small settlement of 5 houses. Population, 50.

Río de la Palma.—Barrio. There is no settlement bearing the name in the barrio, and the records of the barrio are kept at Lacret (Itabo). The barrio contains a number of houses widely scattered over a large territory.

La Teja.—Barrio and sitio. The point called La Teja is 12 miles by road northeast of Martí and consists of a finca and a few scattered houses.

JUDICIAL DISTRICT OF COLÓN.

Township:	Population.
Colón	52,006
Jagüey Grande	10,256
Pedro Betancourt (Corral Falso)	13,044

TOWNSHIP OF COLÓN (CAPITAL, COLÓN).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital. *Miles.*	Population.
Colón	Este de la Villa	Urban and rural.		3,786
	Oeste de la Villa	do		3,338
Agramonte or Cuevitas	Agramonte	Rural	19.3	4,157
Agüica	Agüica	do	7	1,150
Altamisal	Altamisal	do	9.5	2,067
Altamisal Viejo or Chuchu España.				
Amarillas	Amarillas	do	18.7	3,265
Arabos or Macagua	Arabos, Los	do	13.1	1,883
Banagüises	Banagüises	do	6	3,267
Calimete	Calimete	do	13.5	3,683
Caobillas	Caobillas	do	13.7	1,099
Baró.				
Céspedes or Cumanayagua	Céspedes	do	16.2	1,188
Las Ciegas	Ciegas, Las	do	12	1,161
Dos Hermanas or Sardinas	Dos Hermanas	do	11.2	741
Guareiras	Guareiras	do	5	1,962
Jacán	Jacán	do	9.3	1,788
Laguna Grande	Laguna Grande	do	3.5	974
Pijuán.				
Retamal.				
Macagua	Macagua	do	15	907
Manguito	Manguito	do	10	3,151
Marquesita	Monte Alto	do	12.5	823
Palmillas	Palmillas	do	11.2	801
Perico	Perico	do	9	4,102
Quintana	Quintana	do	14.5	888
Roque	Roque	do	12	1,476
San José de los Ramos	San José de los Ramos	do	11	2,953
San Pedro de Mayabón	San Pedro de Mayabón	do	21.8	1,396

Colón.—Barrio and town. The city of Colón is on the old Matanzas Railroad and the old Cárdenas and Júcaro line, these being now part of the United Railroads of Havana. The town is divided into two wards or barrios, viz, Este and Oeste. It is an important town, second only to Cárdenas, in Matanzas Province. The industries of the town consist mainly of raising sugar cane and the following other industries: One soda-water works, 1 distillery, 2 wagon factories, 4 foundries working in iron, and 18 tobacco factories. The population of the town proper is 7,124. There are in the town 948 houses. Water is obtained from various wells, there being no regular city supply. This water is not good. If wells are to be used, those in the northern or higher portion of the town should be used. There is no regular sewer system. The city has constructed several drains underground to carry water from the low portions of the town. They empty into a lagoon to the south of the town. There is no system of lighting, oil or acetylene gas being used. The State owns no buildings in Colón. The town owns city hall, city hospital, jail, and schoolhouse (formerly Spanish barracks). The city hall is well adapted to quarter 300 men. It is in the center of town, fronting Colón Plaza; is two stories high; stone; well water; modern closets; good condition. The jail is in good condition; stone; well water; suitable for 100 men. The school is an old Spanish infantry cuartel; stone; well water; good condition; will quarter 300 men. The rural guard cuartel has stables for 25 horses; situated two blocks north of depot. The railroad station has an excellent corral for 200 animals; well near by. There is a large stone hospital; 100 beds; condition fair; well; modern closets; situated 200 yards south of city hall.

Storehouses: One freight shed at railroad station, 150 feet long, 30 feet wide; has loading platform. No other buildings especially suitable.

Offices: Railroad and government telegraph lines—office of former at railroad station and latter at post-office, which is one square east of Columbus monument, calle Diego.

Telephone in railroad station; connects with ingenio Tinguaro, central Calimete, Perico, Manguito, Amarillas.

There is an ice machine 100 feet west of depot, not in operation (1908). Ice bought at Matanzas.

Desirable camp sites may be found on high ground north of town, 1,000 yards north of old Spanish tower. Here there is spring water, wood, and grass. No camps should be made in any other direction from town, as land is liable to overflow and the wells are liable to be polluted. North of town ground is available for 1,000 men. There are two large, good springs, with sufficient water for that number of men.

An old Spanish tower constructed of stone occupies a position on road running north of town. It has three tiers of fire, is 20 feet high, and 12 feet in diameter.

Railroads: There are two railroad stations. One in southwestern portion of town is the one now used by all roads. One to east of town, property of old Matanzas road, is now abandoned as a regular station. At the former station there are two water tanks, water pumped by steam from wells; one cattle ramp; two sidings, each 600 yards long, alongside of freight shed above mentioned; one siding at depot, 500 yards long; corral above mentioned; siding running north of warehouse, 200 yards long. The old station is a small one, built of stone. Near it are three sidings, 200 yards in all; wooden warehouse, 100 by 20 feet; and a stone ramp.

Four roads lead out of town. One north to Banagüises; one south to Guareiras; one east to Macagua; one west to Perico.

The town is bounded on the north by a wooded hill about 40 feet high, which commands the town. On this hill there is good water from springs, 1,000 yards from the city limits. This portion of the surrounding country is healthful. A force attacking Colón should approach from the north, and after taking the hill the defense of the city would no longer be practicable. South of the city the land is low and swampy. A force advancing from this direction would have to cross the lagoon, into which all the surface water of the city runs, and an arroyo. From the east an advancing force would have to cross this arroyo 1,000 yards from town, and in the rainy season it is an obstacle of importance. On the west flank of the town there is a walled cemetery, 200 yards square, which could be used by a defending force.

Agramonte.—Barrio and town. The town is about 18 miles southwest of Colón, on the U. H. R. R., and was formerly know as Cuevitas. It is the center of a large sugar-growing territory, low and flat; to the west the terrain falls gradually toward Isabel, where the country is entirely overflowed during the rainy season. Here two large lagoons are formed, which remain throughout the dry season, one on each side of the railroad. The one to the north has a soft mud bottom, the one to the south a hard stone bottom. With the exception of a small distillery, the only industry is the raising of sugar cane. In Agramonte barrio are situated the central Unión, central Santa Rita, and ingenio San Ignacio (Asturia), near the town. The population is 1,852. There are 413 houses of all kinds. There is no town water supply. Various private wells furnish good water. There are no sewers, and no lights but oil lamps. The streets, about 14 in number, are rocky, and while not good are passable in the rainy season. The State owns a wooden school building, situated in the northeastern part of the town; suitable for 50 men. This building was built by the American military government in 1901, and is in good condition; well water; oil lamps; no modern closets. The Spanish Club, a two-story stone building (first floor being a tienda) is suitable for 30 men; situated 100 yards west of the railroad station; oil lamps; well water; no modern closets.

The rural guard quarters has stable room for 12 horses. Just south of these quarters are two large fields, fenced by cactus, that could be used as corrals; no shelter for animals; water from near-by wells.

No suitable building for a hospital.

The railroad has a stone building, 300 by 36 feet; situated on siding; suitable for storehouse.

In railroad station is a telegraph office (railroad line). Post-office, 100 yards southwest of depot. Telephone at depot to central Unión and ingenio San Ignacio. There are two other telephones in private houses; one connects with Santa Rita and one with barrio Isabel. There is also a telephone to colonia Maravilla.

Good camp site along both sides of road running out of town to south. In rainy season would have to be drained. Wood and grass scarce.

The Spaniards built for the defense of Agramonte 12 blockhouses; two tiers of fire; 12 by 12 feet, 14 feet high and 2 feet thick. They command all the roads entering town and by cross fire protect the flanks. All are now destroyed but two, one where Jovellanos road enters the town from the north and one on the west side of town.

Railroad station has warehouse previously described, and stone depot 150 by 30 feet. There is a stone ramp for unloading animals, and a large iron water tank (water pumped by steam from well). There are 800 yards of standard siding and a small sugar crane, suitable for unloading freight. Loading platform at depot.

A standard-gauge siding runs south from town to ingenio Ignacio, 3 miles, and a narrow-gauge siding runs southwest and joins the narrow-gauge railroad from Unión.

An approach could be made from any direction. A small cemetery, with a wall 150 by 150 feet, 6 feet high and 2 feet thick, is situated on the west side of town, 600 yards distant. This is the only obstacle of importance near town. About the town run three streets where shacks are built. These shacks are connected by cactus hedges, very high and strong, and to penetrate them machetes would be required.

Five roads run out of town. One dirt road north to Jovellanos; one dirt road east to central Santa Rita; one dirt road west to central Unión; one dirt road southeast to Maravilla. There is also a macadam road connecting cemetery with town.

The Spanish garrison of this place was 200 men. These occupied blockhouses and various houses prepared for defense and when they left town the volunteers took their place. The surrounding country is open and suitable for infantry and cavalry. During the Cuban war columns of Spanish troops prevented Cuban forces from entering the country near this town.

Agüica.—Barrio and village. The barrio is east of Colón, and, besides the village of the same name, contains 7 fincas.

The village is a railroad station on the United Railroads of Havana, 6 miles from Colón, and consists of 3 houses, a post-office, and a stone railroad station, alongside of which is a small warehouse. There are also two sidings and a short spur, amounting in all to about 500 yards of track. Near depot is a small corral, with ramp for loading animals.

The railroad station is connected with Macagua and central Agüedita by telephone.

One and one-half miles north of this village is a point known as Agüica Vieja, which consists of a house and the ruins of an old sugar mill.

Altamisal.—Barrio and village. Centrals España and Tinguara are situated in this barrio. The village is about 9½ miles northwest of Colón, on the Cárdenas and Júcaro branch of the United Railroads of Havana. The principal industry is the raising of sugar cane. Population about 300. No buildings suitable for military purposes. At the railroad station is a stone building, 50 by 20 feet, with loading ramp and about 600 yards of siding. Telegraph office at station. No suitable camp sites, as ground is low. A road runs in a southerly direction to Perico and one south to Retamal.

There is another point in this barrio that was formerly known as Altamisal Viejo, but is now known as Chuchu España. It is at the point where a branch of the railroad leaves the Cárdenas and Júcaro line for the España sugar mill. It is of no importance.

Amarillas.—Barrio and town. A small town on the U. H. R. R., about 18 miles by rail south of Colón and 1½ miles north of the Hanábana River. Has 1,986 inhabitants and about 100 houses. It is a healthful town. Water is obtained from wells and is filtered by inhabitants. Has a railroad depot, water tank, telegraph office, and post-office. Church would hold about 50 men and railroad station about the same number.

Los Arabos.—Barrio and town. In the barrio are the sugar mills Occitania and Aguedita. The town, so called, corresponds to the railroad station of Macagua, which was named after Macagua Vieja before the present town grew up. It is on the U. H. R. R., about 14 miles east of Colón.

The town and railroad station are called Macagua, but the post-office is called Arabos. The principal industry is the raising of sugar cane. Consists of about 150 houses, and of these only 3 are of stone, the rest being small, one-story, wooden buildings, not suitable for barracks. Population, about 800. Water is taken from wells and is bad. Railroad has two tanks; water raised by steam pump; not good for drinking purposes. No sewer system; lighted by oil lamps. Stable room for about 25 horses. Corral for 100 animals near depot, with siding and ramp for loading. No buildings suitable for hospital or storehouses except depot and one stone warehouse. Post-office across street from depot. Government telegraph and telephone in post-office. Telephone connection at railroad station with Agüica and sugar mills Dulce Nombre, Aguedita, and Occitania. Good camp sites on all sides of town, with wood and grazing, but water is bad. There is an old stone blockhouse at each corner of the town. Blockhouses are about 14 feet square, 12 feet high, and 2 feet thick. Small stone building and a warehouse across the track from station. Three railroad sidings, in all about 900 yards. Branch of the railroad leaves main line west of depot and runs northwest to San José de los Ramos. Village flooded with water during rainy season.

Banagüises.—Barrio and town. The barrio contains the central Álava. The town is about 6 miles northeast of Colón, on branch railroad running from Altamisal to San José de los Ramos. Principal industry, raising of sugar cane. Population, 1,130. Water obtained from wells. It is of fair quality. No sewer system and no street lights.

Very few buildings suitable for military purposes. There is a stable for 12 horses, and a stone building used as rural guard quarters; could be used as a hospital. The depot is the only place suitable for a storehouse.

Post-office two blocks west of depot. No government telegraph office and no telephone central. Railroad telegraph office in depot. Rural guard has telephone connection with San José de los Ramos and sugar mills Álava and Santa Gertrudis. No good camp sites.

Five stone blockhouses; three around the town and one on each corner of front of rural guard quarters; 12 feet square and 20 feet high, with walls 2 feet thick.

Branch spur, standard gauge, runs to small colonia, 1¼ miles west. Branch, standard guage, runs northeast to sugar mill Santa Gertrudis; 3⅛ miles long. One runs southwest to sugar mill Alava; 1¼ miles long. There is about 250 yards of siding.

A road runs south to Colón, one southeast to San José de los Ramos, and one east to Altamisal.

Calimete.—Barrio and town. Central Por Fuerza is situated in the barrio. The town is about 13 miles south of Colón, and is on the railroad. Population, 1,180. Water obtained from wells. Streets lighted by oil lamps. There are about 400 small houses, none of which are particularly suitable for military purposes. There is one stone dwelling house which might be used as barracks or hospital. Telegraph office at railroad station. Post-office on Independence street, south of depot. Camp site about 200 yards northwest of depot. Plenty of wood, water, and grazing. About 2,000 yards of railroad siding. A road runs east to Cumanayagua and one north to Manguito.

Caobillas.—Barrio and finca. A rural district southwest of Colón, containing the central Santa Rita. The point bearing the name is a finca and the residence of the alcalde of the barrio. There are 21 other small fincas in the district, and the railroad station of Baró, where there is one store.

Céspedes (*Cumanayagua*).—Barrio and town. The town is situated on a branch of the U. H. R. R. running from Guareiras to Venero, and is 16.2 miles southeast of Colón by road. Population, about 800. Water obtained from wells, and is not very good. There are about 20 small unimportant buildings. The town is flooded with water for from one to two months during the rainy season, and there is a great deal of malaria. At the railroad station is a stone building, 50 by 30 feet. Across from it is a wooden shed, 75 by 30 feet, with siding alongside. There is altogether 300 yards of siding. Near the depot is a water tank. Telegraph office at station, and telephone to ingenio Por Fuerza. Good camp sites north and east of town in dry season, but water is bad and wood scarce.

Las Ciegas.—Barrio and sitio. The barrio is a rural district northeast of Colón and the sitio is a small settlement 12 miles northeast of Colón, on the outskirts of San José de los Ramos, of which place it is practically a part.

Dos Hermanas.—Barrio and sitio. The barrio is a rural district south of Colón, containing 15 fincas, besides the sitio.

The sitio is a colonia (formerly an ingenio), 11.2 miles from Colón. It has 6 houses and a store, but no post-office. The sitio is also known as Sardinas.

Guareiras.—Barrio and town. The town is also known as Colombia and as Sabanilla de Guareiras. It is at the junction of five railroads, 5 miles by rail south of Colón, and is an important shipping point for sugar. Population, about 900. There is no sewer system and no lights other than oil lamps. Water is obtained from various wells and is good. Streets are not paved, and during the rainy season are very bad.

Situated in an open space between the railroad station and the town is the old cuartel of the Spanish guardia civil; built of stone, with a stone tower on one corner 30 feet high, 10 feet in diameter, and wall 2½ feet thick. This tower is arranged for three tiers of infantry fire and commands the junction of the railroad lines and town. The cuartel is suitable for 30 men, and is now used as a school. Situated alongside the railroad station is a large two-story wooden house, which would hold 30 men.

The only stable of any size is in the rural guard quarters; suitable for 12 animals. There are no corrals except one small inclosure at the station, property of the railroad; suitable for 12 animals. There are a number of small private stables which in all would hold 20 horses.

The railroad has a telegraph station at depot and at the same place is a telephone to central Mercedes and colonia Labernito. Post-office is on the street fronting railroad station.

At the railroad there is a shed 100 by 10 yards; portion of the shed is used for station; 1,000 yards of siding; crane for hoisting sugar cane; two stone ramps for loading cattle; and four large iron water tanks.

All ground about the town is used to plant sugar cane, but the land to west is somewhat higher than on any other side. The country is not well drained and no camp site is recommended.

There are 5 small stone blockhouses surrounding the village. All are in bad repair. Dimensions as follows: 10 by 10 feet, 12 feet high, and walls 2 feet thick.

Four roads leave the town. One south to Manguito; one west to Jagüey Grande; one north to Colón; one east to Cumanayagua.

There is no commanding ground. It is all flat and badly drained. Roads difficult to pass over with wagons during the rains. As the southern approach is commanded by the tower described above, an advance is recommended from any other side. Half a mile to the south runs a stream called Río Palmillas; dry in dry season, but during rains fords must be located. The bed averages 15 feet in width; banks low; bottom muddy. Should an approach be made from the south during the rainy season this river, or rather arroyo, will prove an obstacle that should be considered.

The village is an important railroad center, but in time of insurrection only a small force was necessary for its defense, as the surrounding country affords few hiding places for insurgent forces.

Jacán.—Barrio and village. Situated 9.5 miles southeast of Colón. Population, 300. Good water obtained from wells. Contains about 30 small houses of no military importance. No telegraphic or telephonic communication.

Laguna Grande.—Barrio and finca. A rural district containing village of Pijuán, sitio of Retamal, and half a dozen scattered farms of 2 or 3 houses each. The point so called consists of a finca with 3 houses on it. The principal place in the barrio is Pijuán.

Pijuán.—Village. A negro village of about 20 houses at kilometer 40, Cárdenas division of the U. H. R. R. and 3 miles from Altamisal. There are two switches and a cane siding at this point, and a branch of the railroad to the Tinguaro sugar mill. Part of the village is in the municipality of Martí, the boundary line passing through it.

Retamal.—Sitio. About 3¼ miles northwest of Colón, at the junction of 3 railroads. One runs north to Altamisal and one south to Guareiras, and the third is the main Colón-Jovellanos line. The depot is a stone building, 50 by 20 feet, with unloading and loading platform. There are 4 small wooden buildings, a pumping station, and water tank near the depot. Telegraph office at depot. There are about 900 yards of sidings near depot, one branch 150 yards long going to a cane crane south of depot.

Macagua.—Barrio and village. The barrio is a rural district about 4 miles from Arabos, and contains the ingenio Dulce Nombre. The village is about 2½ miles northeast of the station of Macagua and is 15 miles by road northeast of Colón. It consists of about 30 small thatched and wooden buildings, none of which are suitable for any military purposes. No sewer system or lights. Water obtained from wells and is bad. Village is flooded with water in rainy season, the water getting deep enough to enter all the houses. The overflow of water lasts for about a month and sometimes longer.

Manguito.—Barrio and town. The barrio contains the centrals Esperanza, Araujo (Nena), and Mercedes. The town is on the railroad about 4 miles south of Guareiras and about 9½ miles by road southwest of Colón. Principal industry is the raising of sugar cane. Population, 1,181. Water obtained from wells. There are about 400 wooden and 7 stone buildings. The only one suitable for military purposes is a large wooden building on the main street, which would hold a company or make a 30-bed hospital. The railroad depot is a wooden building, 50 by 20 feet, with platforms. Across the track is a building, 50 by 30 feet. There is about 1,500 yards of railroad siding. Post-office on main street; telegraph is at railroad depot. Two roads leave town; one north to Guareiras, and one south to Calimete.

Monte Alto.—Barrio. A rural district, which contains Marquesita and 74 small fincas. No post-office.

Marquesita.—Village. A scattered settlement 12¾ miles east of Colón, and consists of the ruined sugar mill San Luciano and 33 small farms. Total population, 150. There is a two-story house at the mill, which is used as a school. The other houses are huts.

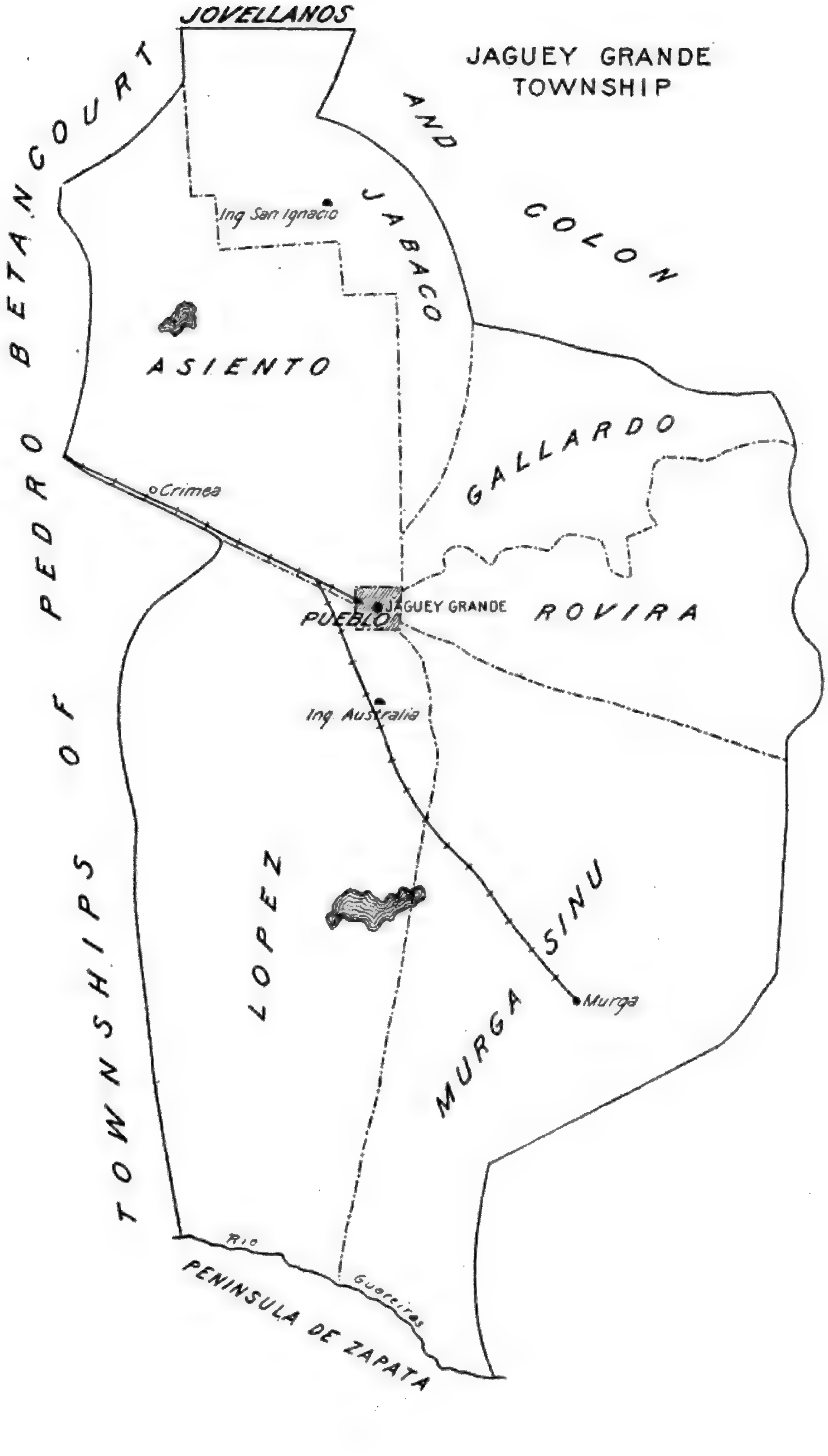
Palmillas.—Barrio and village. The village is about 12 miles southeast of Colón, 3 miles south of Jacán, and 10½ miles southwest of Macagua. Population, about 250. Water is obtained from wells and is not very good. About 20 small houses of no military value. Small stone church, 50 by 20 feet. No telegraphic or telephonic communication.

Perico.—Barrio and town. Situated on the railroad about 9 miles northwest of Colón. The town is divided into two wards or barrios, viz, Norte and Sur. Principal industry is raising sugar cane. Population, 1,322. Good water obtained from wells. No buildings suitable for military purposes except Spanish Club; situated about 300 yards from depot, and would hold about one company or make a 30-bed hospital. There is a stone building, 30 by 60 feet, at depot with unloading platform, and two smaller buildings with sidings but no platforms. Post-office is one block north of depot, on Gonzáles street; telegraph office in same building. No camp sites available. There is about 1,200 yards of railroad siding around depot. Three roads lead out of town—one west to Quintana, one east of Colón, and one northeast to Altamisal.

Quintana.—Barrio and village. Situated on high ground on the Cárdenas and Júcaro Railroad (United Railroads of Havana) 14.5 miles northwest of Colón. The surrounding country is planted in sugar cane and is low to the west and high to the east. Population, about 40. Good water obtained from wooden tank, 400 yards northeast of railroad station. Water raised from well to tank by windmill. Railroad station is stone building, 40 by 22 feet, and would hold 75 men. Stone warehouse, 60 by 20 feet, across from station would hold 75 men. Railroad siding runs alongside warehouse. Good pasture land near by, suitable for camp site. Telegraph station at railroad station. Roads leave town, southeast to El Roque and north to Cárdenas.

Roque.—Barrio and town. The barrio contains the ingenio Reglita. The town is situated near the railroad and is about 2½ miles southeast of Quintana and 11 miles northwest of Colón. Principal industry, raising of sugar cane. Population, 1,000. Water obtained from wells and said to be good. There are about 100 buildings in town, but in the rainy season all are subject to flood. The greater part of the town is covered with several inches of water during the rainy season. In the center of town the high water usually lasts only a few days at a time, but on the outskirts it remains for one or two months. There is a stone church in the center of the town. No telegraphic or telephonic communication. Two roads run out of town; one northeast to Quintana, and one southeast to the sugar mill Reglita. During the rainy season they can not be used and boats are used to leave town.

San José de los Ramos.—Barrio and town. This town is in the eastern portion of Matanzas Province, on the Júcaro


JAGUEY GRANDE TOWNSHIP

line of the U. H. R. R., and is 11 miles by road northeast of Colón. It is situated on a rocky elevation, about 30 feet high, and bounded on the north and west by an arroyo, which during the rains is unfordable. Principal industry, raising sugar cane. Population, 1,389. There are two buildings which are the property of the town. One is the office of the alcalde, a small frame building, suitable for 10 men; the other is the rural guard quarters, frame building, with stable for 8 horses and small yard with stone wall. This latter building would hold 20 men. Water obtained from wells. Oil lamps used for lighting purposes. Telegraph office at railroad station. Telephone in railroad station to sugar mills Santa Gertrudis and Álava. Post-office on main street, 100 yards east of railroad station. No good camp sites. Three standard-gauge railroad sidings; 280 yards in all. One water tank; one ramp for cattle; no platforms. Five roads go out of town: One west to Banagüises, one north to Itabo, two northeast to Corralillo, and one south to Macagua. Best line of approach for attack: During the rainy season the town should be approached from east or southeast, as the Arroyo Naranjo is not fordable and to cross it the bridge must be used.

San Pedro de Mayabón.—Barrio and village. A rural district which contains the village of San Pedro de Mayabón and 48 rural fincas, the principal ones being Santa Lucía, Cuatro Esquinas, La Campana, and La Güira.

The village of San Pedro de Mayabón is on the United Railroads of Havana, 22 miles east of Colón, and has a population of 700. There are 57 houses, including 20 stores. About 70 per cent of the houses are mere huts.

TOWNSHIP OF JAGÜEY GRANDE (CAPITAL, JAGÜEY GRANDE).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Jagüey Grande	Pueblo (Jagüey Grande)	Urban		1,826
Crimea	Asiento	Rural	4.8	1,443
	Gallardo	do	4.5	1,822
	Jabaco	do	7	1,142
	López	do	5.7	1,645
Murga	Murga-Sinú	do	7.2	1,061
	Rovira	do	3.8	1,317

Jagüey Grande.—Barrio and town. The barrio is called Pueblo. The town of Jagüey Grande is the most easterly town of importance on the Navajas-Murga branch of the United Railroads of Havana. It is a shipping point for sugar cane and for sugar from ingenio Australia. The only industries are the raising of sugar cane and some bananas.

The population of the town is 1,826. It has 246 houses, 43 of which are of stone.

Water is obtained from various wells, and while there is no regular city supply, it may be classed as good and plentiful.

There are no sewers, and no lights other than oil lamps.

Buildings suitable for barracks: The municipal government owns the following buildings: City hall, slaughterhouse, and one large wooden building, in bad repair, now rented to private parties. The State owns one wooden school building. Of these the most suitable for troops is the city hall; built of stone; well water; no modern closets; oil lamps for light; walled yard attached; suitable for 50 men. The school building has excellent location in center of town in public square; excellent state of repair; oil for light; no modern closets; suitable for 50 men.

There is one stable on calle Maceo for 20 animals, with corral attached suitable for 30 animals. Another corral for 60 animals, situated on calle San Francisco.

There are no buildings suitable for hospitals.

One stone building, property of railroad company, 100 yards northwest of depot; 100 by 25 feet, with standard-gauge siding, but no unloading platform; would be suitable for storehouse. A stone unloading platform, 15 feet long and 4 feet deep, is situated 25 yards northwest of this storehouse.

Telephone in railroad station connecting with ingenio Australia. Railroad telegraph station in depot. No government line. Post-office on calle San Francisco.

Excellent site for camp of 500 men southwest of depot at end of San Francisco street; good grass and limited supply of wood.

The United Railroads of Havana have in town the following: 3,000 yards of standard-gauge sidings; large water tank, filled from well by steam pump; two sugar-loading cranes.

There are five roads out of town: Telford highway runs north to Jovellanos; a dirt road east to Murga; old Camino Real, east to Santiago de Cuba (dirt road in bad repair); a dirt road west to Torriente; a dirt road southwest to López (barrio).

Best line of approach for attack: Town is situated on elevated piece of rocky ground. To the north is low and swampy land, difficult to cross except by road. Approach in this direction is not recommended. To east and west is much cane, but there is no other obstacle to approach, except that on west side of town there is a small walled cemetery, 150 by 150 feet. Terrain to the south rocky, and an approach could be made through growing cane and heavy underbrush.

Considering the nearness of this town to the great swamp of Zapata, it has excellent health conditions. There is some malaria, but the town is well drained and on rocky soil.

One hundred and fifty Spanish troops formed the regular garrison during the war. The town was also a center of operations for small columns operating about the district.

Asiento.—Barrio. This rural district contains the railroad station of Crimea and 75 fincas.

Crimea.—A railroad station, at which point there are two tiendas.

Gallardo.—Barrio. A rural district containing 128 small fincas, greatly scattered.

Jabaco.—Barrio. A rural district containing the ingenio San Ygnacio (Asturia) and 111 small fincas. There are 4 stores in the entire barrió, one of them being at the ingenio.

López.—Barrio. A rural district containing the ingenio Australia and 63 fincas. There are 3 schools and a store in the entire barrio.

Murga-Sinú.—Barrio and sitio. The sitio of Murga is a small station at the end of the branch railroad running from Navajas to Murga. It is about 7¼ miles southeast of Jagüey Grande. Population, about 23. Water obtained from two wells. No buildings suitable for military purposes. There is a camp site for 400 men, on high ground, 50 yards south of the depot. Good grazing and plenty of wood; water can be obtained from well at depot. Telegraph office and post-office at railroad station; 300 yards of siding. There is a standard-gauge branch road running northeast one-half mile to colonia Victoria, and one running north 1 mile to colonia Babujales.

Rovira.—Barrio. A rural district consisting of 55 small fincas. Has 3 schools and 2 tiendas.

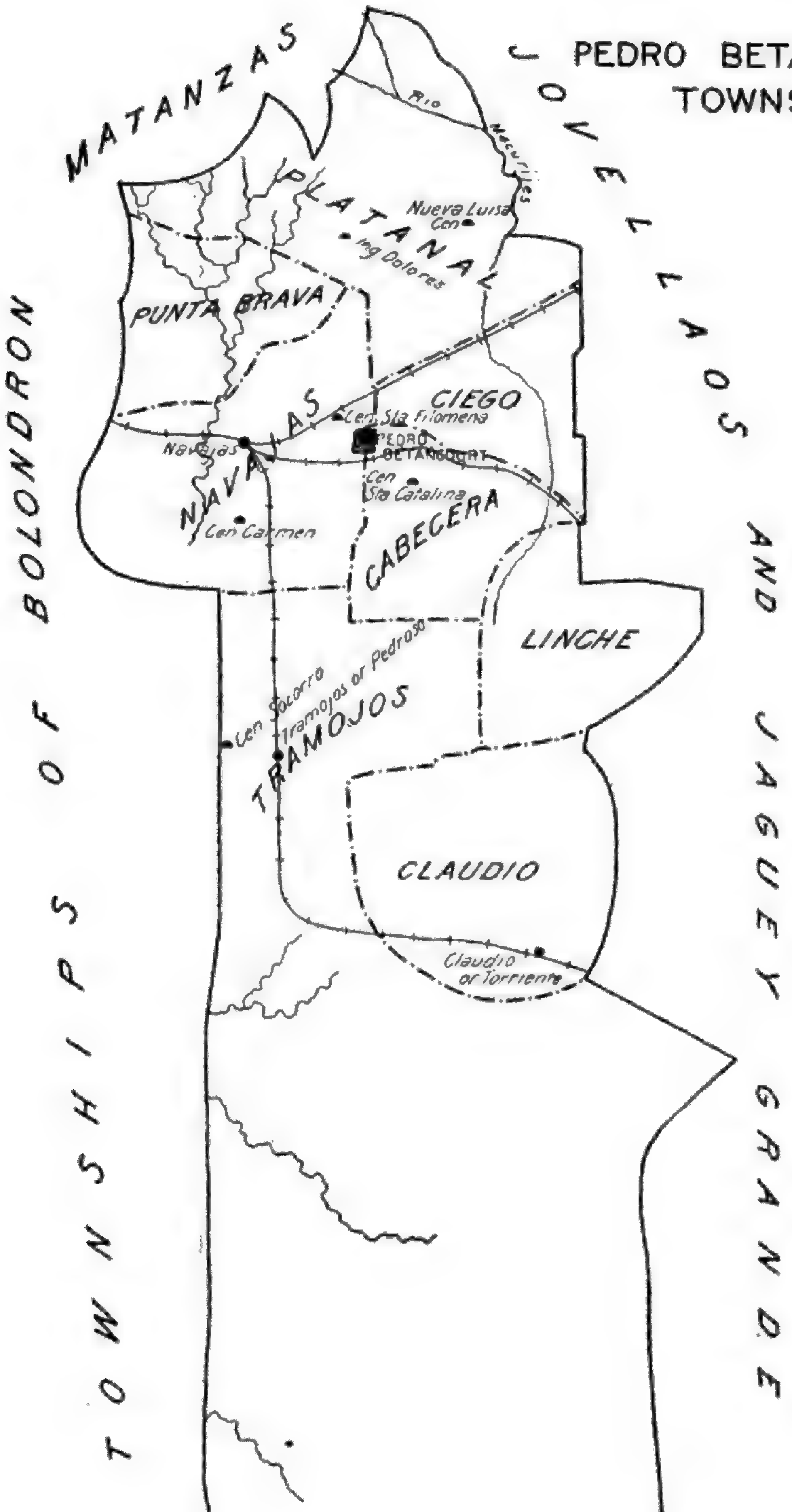
TOWNSHIP OF PEDRO BETANCOURT (CORRAL FALSO) (CAPITAL, PEDRO BETANCOURT (CORRAL FALSO)).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Pedro Betancourt or Corral Falso.	Cabecera	Urban and rural.	....	3,349
Claudio or Torriente	Claudio	Rural	7	1,747
	Ciego	...do	2.1	506
	Linche	...do	6.2	801
Navajas	Navajas	...do	2.5	2,267
Atrevido Concepción. Andrea.	Platanal	...do	5.5	1,624
	Punta Brava	...do	3.8	1,089
Tramojos or Pedroso	Tramojos	...do	7.5	1,661

Pedro Betancourt (*Corral Falso*).—Town. Central Santa Catalina is situated in the barrio which is known as Cabecera. The town is on the railroad running from Matanzas to Colón. The principal industry is the raising of sugar cane. There is, however, a small boiler factory in the town. Population, 3,349. There are 672 houses, of which 150 are of stone or cement. Water is obtained from wells and is good and plentiful.

The town owns the slaughterhouse and city hall. The State owns an old Spanish cuartel. The city hall would make good quarters for 100 men. It is a two-story stone building and has well water and acetylene gas. The cuartel, now used as a school, would hold 100 men. It is built of stone, has stone floors, a large yard, well water, and dry earth closets; situated in the south end of town. There are no stables and no large buildings suitable for storehouses, and there are no good camp sites, the land being low and flat.

PEDRO BETANCOURT
TOWNSHIP



Telephone and telegraph offices and post-office are in a building one square east of railroad station. There are two small stone blockhouses suitable for about 10 men each. The railroad station is at the south end of town and consists of a small stone house, two small storehouses in bad condition, and 200 yards of siding. Four roads lead out of town: One (macadam) west to Navajas, one (dirt) east to Isabel, one (dirt) south to Torriente, and one (part macadam) north to Medina. The town is open to attack from all sides.

Claudio.—Barrio and village. The barrio is a rural district south of Pedro Betancourt and besides the village of the same name contains about 138 fincas and 7 schoolhouses. The village, which is also known as Torriente, is southeast of Pedro Betancourt on the railroad and about 8 miles east of Jagüey Grande. Population about 600. Water obtained from numerous wells. There are about 20 small one-story buildings, a large two-story building, a post-office, and 2 schools. Stable at rural guard quarters for 12 horses. No good camp sites. At the railroad station is a small stone house, about 1,000 yards of siding, and a good ramp. A narrow-gauge railroad, no longer used, runs southeast to San Joaquín.

Ciego.—Barrio. A rural district lying northeast of Pedro Betancourt and containing about 28 small fincas. No point bearing the name of the barrio.

Linche.—Barrio. A rural district lying southeast of Pedro Betancourt and containing about 27 small fincas. No point bearing the name of the barrio.

Navajas.—Barrio and village. The village is an important railroad center, being at the junction of the line running from Matanzas to Colón and the line running south from Cárdenas through Jovellanos. It is also the starting point of a branch line running to Murga. Situated about 3 miles west of Pedro Betancourt and on the south side of the new macadam road to Corral Falso. This road forms the principal street of the village, the only other street being south of and parallel to it. During Spanish times it was the station of 40 guardia civil, and was the center of military operations in the surrounding country. The principal industry is the raising of sugar cane, and within 3 miles are two large sugar mills, Santa Filomena (Enriqueta) and Carmen. There is also a shop where about 40 cane carts are made yearly. Population, about 300. Water is obtained from various wells. It is not plentiful and not good. The railroad company has a large well near the station from which water is pumped into two large iron tanks. Oil lamps light the streets. There are no buildings suitable for quarters for troops except in case of emergency. There are no corrals, but near the railroad station are several large yards that would hold about 50 animals. No suitable camp sites. The railroad station is west of the village, and in it are the telegraph and telephone. At the Tienda Grande is the post-office and a telephone. At the railroad station is a small stone building, an old stone storehouse (75 by 20 feet), two large iron water tanks, a turntable, and a cement ramp. Three roads run out of the village; one south to central Carmen, one (macadam) east to Corral Falso, and one north to central Dolores. Town is open to attack from all directions. During the rainy season the surrounding country is practically under water.

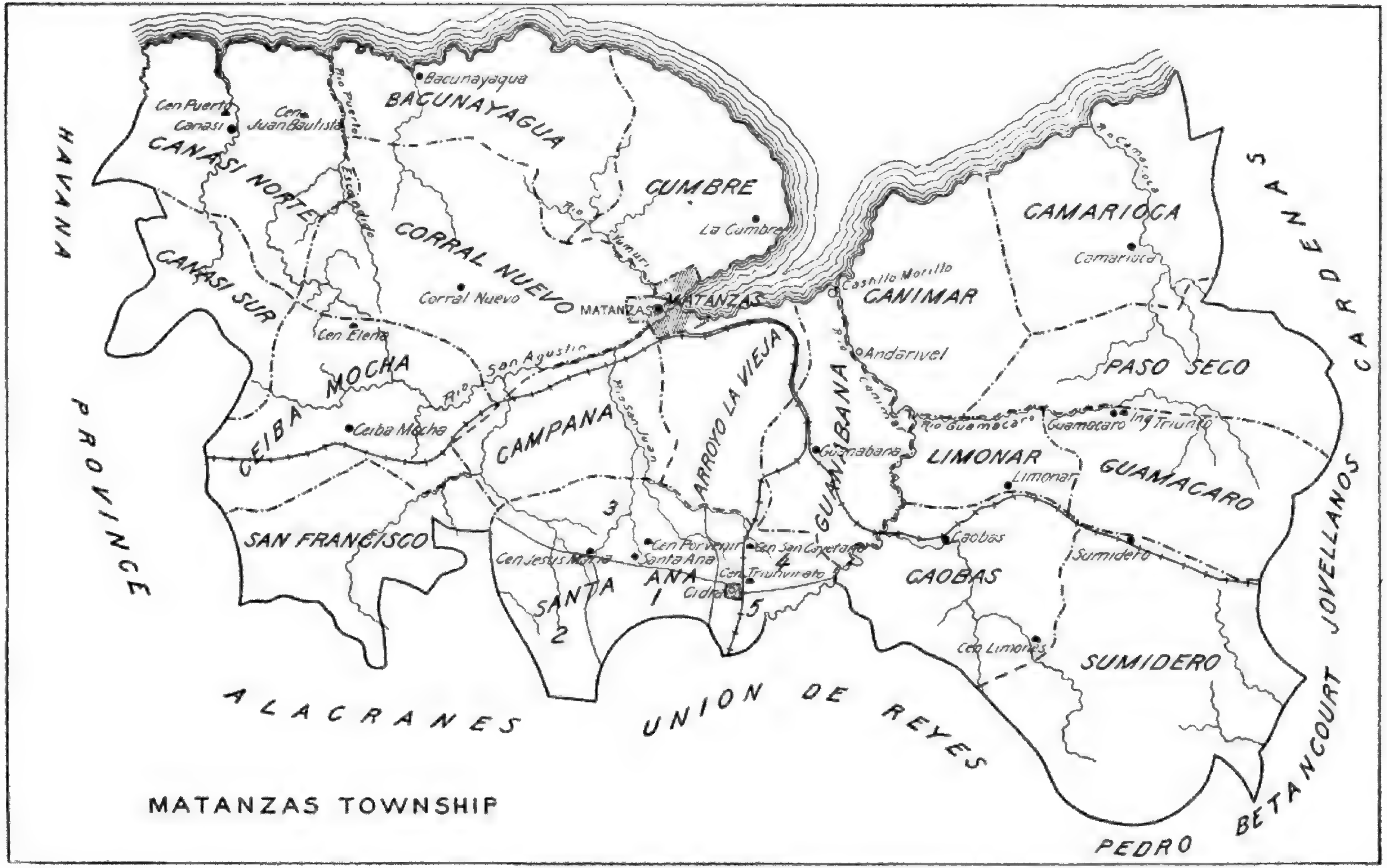
Platanal.—Barrio. A rural district northeast of Pedro Betancourt, containing central Nueva Luisa, ingenio Dolores, and about 22 fincas. The principal places in the district are on the Atrevido branch of the Matanzas division of the U. H. R. R. They are Atrevido, Concepción, and Andréa. All are small, unimportant sitios.

Punta Brava.—Barrio. A rural district northwest of Pedro Betancourt, containing about 36 small fincas. No settlement bearing the name of the barrio.

Tramojos.—Barrio and village. The barrio is a rural district south of Pedro Betancourt and contains 32 small rural fincas and the sugar mill Socorro. The village of this name corresponds to the railroad station Pedroso. It is situated about 5 miles south of Navajas, on the railroad from Navajas to Murga, and 7½ miles by road southwest of Pedro Betancourt. An unimportant place, consisting of a railroad station, a store, and 7 houses. At the station is 1,000 yards of standard-gauge siding.

JUDICIAL DISTRICT OF MATANZAS.

Township:	Population.
Matanzas	64,385



MATANZAS TOWNSHIP

TOWNSHIP OF MATANZAS (CAPITAL, MATANZAS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Matanzas	Bachicha	Urban		536
	Bailén	do		2,907
	Barracones	do		2,310
	Bellamar	do		716
	Cárcel	do		4,520
	Colón or Vigia y Palacio	do		1,386
	Ojo de Agua	do		4,229
	Refugio or San Juan	do		4,406
	San Luis	do		1,738
	San Severino	do		2,353
	Simpson or Monserrate	do		2,233
	Versalles	do		4,553
	Yumurí	do		4,794
Encrucijada	Arroyo la Vieja	Rural	3.7	328
Bacunayagua	Bacunayagua	do	10	1,627
Camarioca Boca de Camarioca.	Camarioca	do	16	1,311
San Francisco de Paula	Campana	do	3.8	943
Canasí	Canasí Norte	do	15.2	2,188
	Canasí Sur	do	13.5	1,303
Andarivel	Canímar	do	8 2	735
Caobas	Caobas	do	13.2	(a)
Ceiba Mocha	Ceiba Mocha	do	10.5	2,683
Corral Nuevo Benavides.	Corral Nuevo	do	7.5	1,443
La Cumbre	Cumbre	do	4	1,308
Guamacaro	Guamacaro	do	16.2	(a)
Guanábana Castillo del Morillo	Guanábana	do	7.7	1,610
Limonar	Limonar	do	15.7	(a)
	Paso Seco	do	14.7	530
	San Francisco	do	11.5	600
	Santa Ana 1°	do	8.5	1,379
	Santa Ana 2°	do	9.7	849
	Santa Ana 3°	do	9	1,092
Cidra	Santa Ana 4°	Rural and urban.	10	850
	Santa Ana 5°	Rural	9.3	200
Sumidero	Sumidero	do	16	(a)

[a] The total population of Guamacaro, Limonar, Caobas, and Sumidero is 6,681.

Matanzas.—Town. Situated on Matanzas Bay, on the main line of the United Railroads of Havana. It is also connected with Havana by another railway via Güines, and a third line runs to Unión de Reyes. Matanzas was first settled in 1693. It is 54 miles east of Havana by the most direct railroad route. It is divided geographically into four districts: (1) Matanzas, between the rivers Yumurí on the north, and San Juan on the south; (2) Pueblo Nuevo, south of the San Juan; (3) Versalles, north of the Yumurí; (4) The Playa, along the south shore of the bay. The Matanzas district, the oldest and where are situated the principal public buildings and business houses, is low near the sea and along the rivers, but at the center rises gradually to an elevation of about 150 feet at one mile from the bay. The Plaza, however, the business and governmental center of the city, is only about 20 feet above sea level. Pueblo was once marshy, and is still low and subject to inundations of the river at times of extraordinary rainfall. Here, along the San Juan, are the great sugar warehouses, and near the bay shore the railway yards and shops. Versalles is a residential district, and contains the barracks, hospitals, asylums, etc. The land slopes up quite rapidly so that all is high above floods and well drained. The Playa is practically a single row of residences bordering the fine drive of that name along the bay. It, too, is very low, but its proximity to the sea seems to render it healthful in spite of this fact. The town is also divided into 13 wards or urban barrios.

Matanzas is an important commercial city, second only to Havana. Center and shipping point of the largest sugar district of the island. Has many large warehouses, all connected by spurs with the railway yards. At present most of the sugar, molasses, and aguardiente, which form the bulk of the exports, are lightered from the warehouses along the San Juan River to ships, which, owing to the shallowness of the harbor, anchor about one-half mile out from the customhouse wharf. All the imports are unloaded at this wharf, which is of pile and board construction and has only 10 feet of water alongside. There is a fine modern wharf near Fort San Severino. This wharf has 40 feet of water at its extremity, but it is now in bad repair. A concrete and steel wharf is building a short distance along the bay shore, which will accommodate the largest ships entering the harbor. This wharf is to be used in connection with warehouses, electric-power plant, cement factory, distillery, etc., being built by an American syndicate (1908). There are 3 tanneries in operation, and large quantities of shoes, saddles, and other leather articles are manufactured from their product. Among the manufactures of lesser importance are cigars, straw hats, lime, soap, paint, rum and like products, chocolate, guava jelly, refined oil, trunks, brooms, etc. The railway company maintains extensive shops.

The streets are mostly 30 feet wide, with a 24-foot wagonway. Few are paved, but nearly all are macadamized, and most are in an excellent condition. There are three well-kept plazas, several small parks, and two beautiful drives, viz, the Paseo de Martí, along the north shore of the bay in Versalles, and the Playa Bellamar, along the south shore. Other picturesque spots about the city are the Bellamar Caves, remarkable, large, and beautiful limestone caverns 2 miles west of the city; Ermita de Monserrat, a church, on the top of the ridge inclosing the town to the north and west and commanding a wonderful view of the city, bay, and the Yumurí Valley to the west; the gorge of the Yumurí, a canyon cut through the ridge above mentioned. Its almost perpendicular walls, honeycombed by caves and festooned with tropical vines are most beautiful, as is the view of the valley seen beyond. Fort San Severino, an old battery, is a square work with four bastions, moat, ancient ordnance, etc. The city is kept very clean and is exceptionally healthful, the death rate of 1906 being only 17.48. The harbor is about 3 miles long on its northwestern shore and about 5 miles long on the southeastern. It is 3 miles wide at its entrance and 1¼ miles wide at the anchorage ground. This extends from one-third to two-thirds of a mile out from the shore, opposite Versalles. Matanzas is a civic, religious, educational, and social center of considerable pretensions. Among the prominent buildings are the palace, audiencia, civil hospital, institute or high school, cuartel Agramonte, Fort San Severino, Ermita de Monserrate, Spanish Casino, Cuban Club or Lyceum, Sauto theater, cuartel de Bomberos, Catholic and Protestant churches, and a number of schools, charitable institutions, etc.

Population, 36,009.

Water supply: The city is supplied with water by the Matanzas Water Company, a private corporation. The water is brought from the Bello Springs, 7 miles southwest, through an iron pipe 15 inches inside diameter. The cement settling basin, which is 85 feet above the level of the plaza, has a capacity of 1,200,000 gallons. On the outskirts of the city is a second pumping station, where a portion of the water is raised to 150 feet above sea level to reach the residence portions of Matanzas and Versalles on the hills. There are about 15 miles of mains. About 3,500 of the 6,500 buildings in the city are connected with the system. A recent ordinance requires all to have water, and within a year this will be accomplished (1908). The wells have practically all been condemned as unsanitary. There are 45 public fire plugs. The capacity of the plant is about 3,500,000 gallons daily, while the present consumption is about 1,800,000 gallons daily. The water is excellent. There is a good fire department, with new, modern equipment.

Sewers, lighting, etc.: The city is practically without sewers. There is one about five blocks long extending from the civil hospital past cuartel Agramonte to the bay and serving only those two buildings. There are about five or six short ones at various places in Matanzas and Pueblo Nuevo, but none are connected with buildings, and serve simply to carry off surface water. The cesspool system is universally used, and the porous character of the rock on which the city is built renders it less unsanitary than would be supposed.

In Pueblo Nuevo, at the north end of calzada Burriel, on the bay, is the electric light plant. There are 225 arc lights on the streets and 72 in public buildings, clubs, etc., making a total of 297. There are 1,019 sixteen-candle power incandescent lights, mostly in stores and residences. The plant is old and loaded to its capacity. In Matanzas, at Cuba and Compostela streets, there is a gas plant. Consumption from 12,000 to 15,000 cubic feet per day. Gas of fair quality, but expensive. A new plant for the manufacture of both electric light and gas is situated in Pueblo Nuevo near the Calixto García bridge. This plant is modern and of a capacity to supply all demands for years to come.

Barracks: Cuartel Santa Cristina, or cuartel Agramonte, as it is now called, is in Versalles, about four squares from the Concordia bridge and at the west end of Paseo de Martí. It occupies with its surrounding grounds about four city blocks. It is built about a patio or yard and is 290 by 360 feet, exterior dimensions. The east side has two stories, the others one. It is of stone or concrete with tiled roof and is massive and substantial in construction. It has a private sewer running to the bay and is amply supplied with toilet and bath facilities. It is wired for electric lights, but has also a large acetylene gas plant. It will accommodate 600 men comfortably, with additional room for quartermaster and commissary storerooms, offices, etc. It is in good repair and excellent sanitary condition. Aqueduct water is used.

Castillo de San Severino, an old Spanish fort, is on the bay shore one-half mile east of Cuartel Agramonte and near the eastern end of the Paseo de Martí. It is a square, four-bastioned work of substantial construction and was probably originally intended for a garrison of 200 men. Most of its buildings are of casemate construction, though there is one two-story building, 30 by 116 feet, on the terreplain. It has been supplied with aqueduct water, sewers and other sanitary arrangements, and is used for barracks for the rural-guard force stationed in the town. It will easily accommodate 100 men, and furnish appropriate storerooms and offices. The following buildings, all having modern plumbing and aqueduct water, could be used for barracks in an emergency:

Name.	Location.	Public or private.	Capacity.
The Palace	Plaza de la Libertad	Public	300
Sauto Theater	Plaza de Colón	Private	200
Audiencia	do	Public	100
Spanish Casino	Plaza de la Libertad	Private	100
The Liceo	do	do	100
The institute or high school	do	Public	150
Fire department	Plaza de Colón	do	100
Miss Toland's school	Plaza de la Libertad	Private	100

There are 3 Catholic and 5 Protestant churches that would afford temporary barracks for the accommodation of 1,000 men. Some of these have no water supply, and none are fitted with modern plumbing. There are many large warehouses that might also be taken for very temporary use. They are, however, low and damp and have no sanitary arrangements.

Stables: There are many suitable stables for 2 or 3 animals in various parts of the city, but only four of sufficient size to be of military importance, viz: (1) Public Works Department stables, Santa Isabel and Jovellanos streets; capacity 100; aqueduct water. (2) Livery stable, Santa Isabel street, near No. 1; capacity, 50; Ojo de Agua spring water. (3) Livery stable, Contreras and Nicolás Heredia streets; capacity, 100; aqueduct water. (4) United States quartermaster department corral; Santa Cecilia and San Alejandro streets; capacity, 120; aqueduct water.

Transportation corrals: Each of the first three stables above described is so constructed as to contain an appropriate number of vehicles. The quartermaster corral is not of sufficient size, but there is ample open ground in the immediate vicinity for picket lines and for almost any number of wagons. All are amply supplied with good water for all purposes. If inclosures are desired there are two such (vacant city blocks surrounded by 5-foot stone walls) near the quartermaster corral. Each would accommodate (without shelter) 200 animals.

Hospitals: There are 4 hospitals, all in Versalles, viz:

Name.	Location.	Public or private.	Capacity.
Civil	Santa Rita and San Isidro streets.	Public	200
Spanish	San Alejandro and Unión streets.	Private	40
Old Peoples' Home	Paseo de Martí and Santa Cecilia streets.	do	60
Post Hospital	Cuartel Agramonte	Public (United States)	20

All are supplied with aqueduct water, are in excellent repair, and have every essential and sanitary arrangement. There are, of course, many public buildings and large private residences that could easily be arranged for hospital purposes. One in particular, at Aramburu and Versalles streets, Versalles, was used as a military hospital during the first intervention, and is in every way suitable for the purpose.

Quartermaster and commissary storehouses: The railway company maintains 3 freight houses in Pueblo Nuevo. (1) At Tirry and San Andrés streets (station of old Matanzas Railroad Company), 40 by 200 feet. Cars run under shed roof and unload directly into building without use of platform. Track on one side only. At street side there is a 3 by 3 foot platform full length of building for facilitating loading and unloading wagons. (2) One hundred yards directly east of No. 1 (80 by 140 feet). A single track through center of building. Low, narrow platforms on both sides for wagons. (3) One hundred yards directly west of No. 2 (40 by 120 feet). Track on one side. Narrow, low platform on opposite side for wagons. Just north of this building there is a platform partly of earth, with stone side walls, and partly of plank (20 by 200 by 4 feet). In the same section of the city there are many large sugar warehouses that might be used. They are all connected with the railway yards by spurs.

Location of important offices, etc.:

Name.	District of city.	Streets.
Railway station, passenger	Pueblo Nuevo	Estéban and Tirry.
Railway station, freight	do	San Andrés and Tirry.
Post-office and telegraph office.	Matanzas	Jovellanos between Constitución and Contreras.
Telephone central	do	Contreras between Magdalena and Heredia.
Palace	do	Plaza de la Libertad.
Audiencia	do	Plaza de Colón.
Fire department headquarters	do	Do.
American consulate	do	O'Reilly between Plaza de Colón and Matanzas.
Water company's office	do	Do.
Police headquarters	do	Contreras and Second of May.
United States Marine-Hospital Service.	do	Concordia building near Concordia bridge.
Custom-house	do	Foot of Constitución.

Ice machine: There are two ice plants, both belonging to the Matanzas Ice Company. The old plant called Los Molinos is on the San Agustín River 2½ miles west of the Plaza; reached via Zaragoza street and the cemetery road; capacity, about 20 tons; aqueduct water; plate system; water power. The new plant is on Embarcadero street near the new market; capacity, 10 tons; distilled well water; can system; steam power.

Camp sites: There are only two practicable camp sites near the city, viz: (1) In Versalles, along the Paseo de Martí and extending to the north and east of Fort San Severino. This is the site of old camp Hamilton, occupied during the first intervention. It consists of a series of nearly level terraces with about 20 feet difference in level between each two. The soil is very thin and rocky but the drainage is good. The limestone rock is porous. The close proximity to the bay insures comparative coolness and immunity from fever mosquitoes. Water can easily be piped to this place from the city system. Grazing can be had on the hills to the north and west. Wood, except for small commands, would have to be purchased from dealers. This site is suitable for a brigade camp. (2) West of cemetery and about 2 miles from the center of the city. A well-drained open field near the San Agustín River. The aqueduct runs through this field and could easily be tapped to supply any sized camp. The grazing in the vicinity is excellent. Wood can be procured on the hills one-half mile north in limited quantities. The river will afford bathing facilities. Suitable for a regiment. This site was used at intervals during the first intervention.

Fortifications: Separate report on file in Second Section General Staff. All fortifications are about the harbor.

Railroads: The main line of the United Railroads of Havana runs along the southern edge of the city. A spur leaves the main line near the southwestern edge of the town, runs parallel to and near the San Juan River, and connects near the San Luis bridge with the system of sidetracks in the warehouse district. The old Matanzas Railroad comes into the city from the west, paralleling the tracks of the United Railroads, and near the latter's passenger station runs north along Mosto street to its station on Tirry street. It also connects with the various sidetracks near the mouth of the San Juan River, in Pueblo Nuevo, and probably about 5 miles of tracks about the sugar warehouses. Both systems are now operated by the United Company. There is trackage for at least 1,000 cars. Either the passenger or the freight station will offer excellent facilities for entraining or detraining troops. Animals and supplies will be best handled at the freight house described above under storehouses, or at any of the sugar warehouses. The facilities are excellent and ample.

Macadamized roads leading out of town:

1. Cidra, 10½ miles south. Leave city via Constitución and Second of May streets, San Luis bridge, and San Luis street.

2. Yumurí Valley and Corral Nuevo; macadamized portion extends 11 miles northwest; dirt road continues to Canasí, 17 miles northwest. Leave city via Constitución street.

3. Bellamar caves, 2½ miles east. Leave city via Tirry and General Betancourt streets and the Playa Bellamar.

4. Cemetery, 2 miles west. Leave city via Constitución, San Gabriel, and Zaragoza streets. This road is now being extended to the vicinity of Güines via Ceiba Mocha and Madruga to connect with the road to Havana.

There are in addition dirt roads west to Ceiba Mocha via Pueblo Nuevo and the San Juan River; southwest to Madruga and Cabezas; east via the Bellamar caves to Tumbadero and Limonar; and northeast along the bay to country district, etc.

Best line of approach to attack: If the attacking party should come by water, a landing should be made, if possible, on the northern shore of the bay at Punta Sabanilla, where there is a small wharf. The prompt seizure of the ridge paralleling the sea at one-half mile would enable the attack to proceed along this ridge and take any attempted defense from this side in flank. This ridge commands Fort Severino, all of Versalles, and practically the entire city. An attack by land could best be conducted along the east and west ridge, which bends abruptly north at about 1 mile from the harbor. This route parallels the railroad, San Agustín River, and the aqueduct for several miles. It commands both the San Juan and Yumurí valleys, and its advantages are obvious.

Arroyo la Vieja.—Barrio. A section of country made up of about 14 fincas. It has about 36 scattered houses and 1 store. It contains a point called Encrucijada, consisting of a store and a house, situated at the junction of the macadamized road from Matanzas to Cidra with the one to Guanábana, Limonar, and the east.

Bacunayagua.—Barrio and sitio. Named after a small river of same name, which empties into the sea, forming an inlet and fair harbor.

The point bearing the name consists of the ruins of the buildings formerly belonging to a large finca.

Camarioca.—Barrio and village. Besides the village of the same name the barrio contains the sitio of Boca de Camarioca. The village is east of Matanzas and consists of about 12 houses, three of which are stores. These three buildings would quarter about 65 men each. There are excellent camping places about the village, and good water can be obtained from wells and from the near-by Camarioca River. Grazing is good. There is a ford at the village where the water is about 1 foot deep in dry season; current about 4 miles an hour, bottom rocky, banks low. The western bank is somewhat steep and commands the eastern bank.

Boca de Camarioca.—Sitio. Situated at the mouth of the Camarioca River and consists of 3 or 4 houses.

Campana.—Barrio. A rural district lying southeast of Matanzas and containing the sitio of San Francisco de Paula and about 38 fincas. In the district there are about 153 scattered houses, 4 stores, and a couple of schoolhouses. The barrio also contains Bello Springs, the source and pumping station of the water supply of the city of Matanzas. At this point there is a bridge. The schoolhouses above referred to are at Quincena and Grima, at which points there are also stores.

San Francisco de Paula.—Sitio. On the railroad running from the sugar mill Jesús María to Benavides. Consists of small railroad station, a schoolhouse, and about 6 houses. Population, about 30.

Canasí Norte.—Barrio. A rural district lying northwest of Matanzas and containing the village of Canasí, and the sugar mills Puerto and San Juan Bautista.

Canasí.—Village. The village is about 15 miles northwest of Matanzas, on the west bank of the Canasí River. It is a small interior place, entirely dependent on the agricultural resources of the surrounding country. Reported in October, 1908, that typhoid fever had made its appearance in the village. The sugar mills Puerto and San Juan Bautista are quite near. There is a standard-gauge railroad running from central Puerto to Puerto Canasí. Nearly all supplies come through this port.

There is a fine macadam road from Matanzas to within 7 miles of Canasí.

Population, about 500.

Water obtained from the Canasí River and hauled about in carts; poor supply. Streets sparsely lighted by oil lamps.

The church is the only building suitable for barracks. It would shelter 100 men in an emergency. There are 2 sugar warehouses, one at the mouth of the river and one half a mile above, each of which would shelter 100 men.

Central Puerto, one-half mile north, would shelter about 400 men.

No stables of consequence and no corrals, but there is a suitable piece of open ground east of village on the river.

The rural guard barracks could be used as a 10-bed hospital.

The two sugar warehouses referred to above would be good storehouses. There is a small wharf at each, at which small schooners or lighters drawing not more than 5 feet could land cargo.

There is a camp site just east of the village on the river, and another at central Puerto.

No railroad or telegraph station. Post-office on main street near center of the village.

Telephone line from Matanzas via Corral Nuevo.

Roads lead to Matanzas, Aguacate via La Botina, Jibacoa, central Puerto and Puerto Canasí, and central San Juan Bautista.

Best line of approach for attack, from rough country to northwest.

Canasí Sur.—Barrio. A rural district lying west of Matanzas and south of and adjoining the barrio of Canasí Norte.

Canímar.—Barrio. A section of country named after the Canímar River. Contains a free municipal ferry over the Canímar River at Andarivel, about 3 miles above the mouth of the river.

The ferry is equipped with a platform, about 12 by 20 feet, supported by two air-tight cylinders having a carrying capacity of about 3½ tons. It is operated by means of a cable stretched between the banks. The river here is about 60 yards wide and 20 feet deep at high tide. The banks are steep and the ferry could be easily defended.

At this point there is a small store which would hold 10 men. It is an important place only by reason of being on the borders of "Las Piedras de Camarioca." About 100 yards downstream and on the east bank close to the river is a splendid spring of excellent water, with a flow sufficient to supply a regiment.

Caobas.—Barrio and sitio. The barrio is a rural district lying southeast of Matanzas and is made up of about 20 fincas. There are about 300 scattered houses, 8 stores, and 3 schools. The sugar mill Limones is situated within its boundaries.

The sitio is on the United Railroads of Havana about 2 miles southwest of Limonar. It is an unimportant point.

Ceiba Mocha.—Barrio and town. Central Elena is in the barrio. The village is about 11 miles west of Matanzas on main line of the United Railroads of Havana. Good little country town, dependent upon agricultural resources of surrounding country. This section has but little cane. There is an American colony of about 15 farmers just east of the town who are developing excellent fruit farms; oranges and pineapples are the staples. There are also two or three Americans who are raising blooded stock, and going quite extensively into dairying. In addition there are a number of apiaries in the vicinity.

Population, about 800.

Water supply obtained from one public well and about five private wells. The latter are not reliable, however, and the public well practically supplies the town. It has a large windmill and is also fitted with a drum for horsepower. There is a 2,000-gallon tank on the ground for a reservoir. No mains. Water plentiful and good.

No sewer system. Streets sparsely lighted by oil lamps. There are a number of private acetylene-gas plants in stores and residences.

The church is the only suitable building for quarters for troops, though there are a number of stores and residences that might be used if shelter were imperative. Church will hold 100 men; is clean, though without sanitary arrangements. The public well is within 50 yards.

No stables of any consequence. The rural guard barracks has stable for 15 horses.

No corrals. Pasture, just to west of Matanzas hill road and near public well, is the best ground for transportation corrals.

The church and the rural guard barracks are the only suitable public buildings for use as hospitals. The latter is clean, though without sanitary arrangements. It is quite near public well from which water supply would be obtained.

The railroad station is about one-half mile east of the center of the town. It is of usual construction, 25 by 60 feet, with a sidetrack on one side. There is a platform 10 feet wide, full length of building, which is used for freight and passengers.

Telegraph office at station. Post-office on main street near church. There is no telephone exchange.

Only suitable camp site is to the north of the church near public well. Grazing is scarce near by, but plentiful about 2 miles northwest, near the San Agustín River; wood plentiful. On a ridge of hills 1 mile southeast, 150 feet high and commanding the town and railroad, is a site which would accommodate a battalion. It is well drained and sanitary.

No defenses.

Railroad runs nearly east and west about 500 yards south of the town. There are three sidetracks with a capacity of 100 cars. Loading and unloading must be done at station.

Roads lead to Matanzas, Canasí, Empalme, and San Francisco de Paula via American colony.

The best line of approach for attack is from the rough country to the south.

Corral Nuevo.—Barrio and village. Besides the village bearing its name the barrio contains the sitio of Benavides.

The village is about 7½ miles west of Matanzas on the Matanzas-Canasí calzada. Population, about 150. It consists of 2 stores, blacksmith shop, church, schoolhouse, and about 15 houses. Telephone line to Matanzas and Canasí. An automobile stage line makes daily trips from Matanzas. Good camp site for a battalion one-half mile east of the village on the Yumurí Creek.

Benavides.—Sitio. About 9 miles southwest of Matanzas on the railroad and consists of a small railroad station and a schoolhouse. From this point a private railroad runs to San Francisco de Paula and the sugar mill Jesús María.

Cumbre.—Barrio and sitio. The barrio is a rural district lying north of Matanzas. It is sparsely settled and is a grazing country. The sitio known as La Cumbre is an old summer resort in the mountains near the coast. It is now practically in ruins.

Guamacaro.—Barrio and sitio. The barrio is a rural district lying a little south of east of Matanzas. The sitio consists of the buildings pertaining to the sugar mill Triunfo (La Julia) and the homes of the employees. Water is obtained from a running stream and from wells and is good. About 300 troops could be sheltered at the mill, and near at hand are excellent camping places and plenty of good grazing.

Guanábana.—Barrio and village. The barrio is a rural district lying southeast of Matanzas. The village is at the junction of the main line of the United Railroads of Havana and the branch to Unión de Reyes. Population, about 100. Water supply obtained from wells and is plentiful, but of poor quality. Village consists of 2 stores, a schoolhouse. railroad station, post-office, and about 20 houses.

Castillo del Morillo.—Old fort. Situated at mouth of Canímar River, on the left bank. It is one of the fortifications of Matanzas city, but is of no importance. It is at present used by the customs service as quarters for an inspector. Water is obtained from a well and a cistern. Quarters for 40 men.

Limonar.—Barrio and town. The village is about 15 miles southeast of Matanzas, on the main line of the United Railroads of Havana. It is an unimportant place and dependent upon surrounding country.

Country to north produces nothing but charcoal.

Population, 1,659.

Water obtained from two public and two private wells. All except one go dry during an extended dry season.

Catholic Church near north end of town and high school near post-office are the only buildings suitable for occupancy by troops. Each would hold 100 men. Church is near the only reliable well.

No stables or corrals, but plenty of open ground, with good grazing, to west and north.

There is a railroad freight house, 24 by 80 feet, with tracks on both sides.

Telegraph office in railroad station at south end of town. Post-office on main street, 2 blocks north of depot.

Good open country for camps to southwest and north. Good grazing and wood; water from wells.

Railroad runs along south edge of town and has two sidetracks; capacity, 50 cars. Standard-gauge private railroad to sugar-mill Limones.

Roads lead to Guanábana, Matanzas, Limones, Bolondrón, and Sumidero.

Best line of approach for attack, from rough country to northwest.

Paso Seco.—Barrio. A rural district lying east of Matanzas and containing about 32 fincas. There are about 150 scattered houses. No point bearing the name.

San Francisco.—Barrio. A rural district situated 11½ miles south of Matanzas.

Santa Ana.—Barrio. A rural district lying south of Matanzas and subdivided into 5 barrios, named Santa Ana 1°, Santa Ana 2°, Santa Ana 3°, Santa Ana 4°, and Santa Ana 5°. In Santa Ana 3° are the village of Santa Ana and the sugar mills Jesús María and Porvenir (Los Angeles), and in Santa Ana 4° are the village of Cidra and the sugar mills San Cayetano and Triunvirato.

Santa Ana.—Village. Consists of 2 stores, a schoolhouse, 2 good houses, and about 10 huts.

Cidra.—Village. Situated 10 miles south of Matanzas on the railroad running from Matanzas to Unión de Reyes.

It is an unimportant place, supported largely by the two sugar mills, Triunvirato and Cayetano, which are north of the village, one-half mile and 1 mile, respectively.

Population, about 600.

Water is obtained from a public well near the railroad station; 20 feet deep, with 10 feet of water. There are also three private wells.

The only two buildings suitable for barracks are a two-story building, 24 by 60 feet, and a one-story building, 25 by 50 feet, both near the railroad depot. They would shelter one company.

No stables or corrals, but there is open ground in all directions.

No suitable buildings for hospital.

There is a freight warehouse, 30 by 80 feet, with tracks on both sides. Small loading platform just south.

Railroad station and telegraph office on main street. Post-office two blocks west of station.

Best camp site is 2 miles south, on Canímar River. Wood and water scarce near village.

In the village are three sidetracks. A private railroad runs to the sugar mill Triunvirato.

Roads lead to Matanzas, Sabanilla, San Francisco de Paula, and Guanábana.

Best line of approach for attack is from the rough, hilly country to west and north.

Sumidero.—Barrio and sitio. The sitio is on the main line of the United Railroads of Havana, southeast of Matanzas, and consists of a small railroad station and about 12 wooden houses. There is a good well, from which water is raised into an iron tank by means of a windmill.

PROVINCE OF SANTA CLARA.

TABLE OF DISTANCES, IN MILES, BETWEEN TOWNS IN PROVINCE OF SANTA CLARA.

Amaro.																									
52	Caibarién.																								
19	26	Calabazar.																							
41	20	19	Camajuani.																						
40	68	48	48	Camarones.																					
29	78	48	58	22	Cartagena.																				
52	81	64	64	16	26	Cienfuegos.																			
10	46	13	32	40	39	56	Cifuentes.																		
45	97	64	83	70	48	74	55	Corralillo.																	
22	49	29	29	24	29	40	22	67	La Esperanza.																
32	65	45	15	8	23	22	32	68	16	Las Cruces.															
52	90	70	70	22	22	16	51	71	16	30	Los Abreus.														
46	73	54	54	6	16	10	46	64	30	14	16	Palmira.													
13	65	32	54	51	35	67	22	32	35	43	58	49	Quemados de Güines.												
22	55	35	35	18	23	34	22	65	6	10	32	21	33	Ranchuelo.											
42	87	67	67	25	13	19	51	61	38	30	10	16	48	32	Rodas.										
13	52	19	38	53	42	65	13	45	35	45	64	55	26	55	55	Sagua La Grande.									
45	7	26	13	61	65	77	39	90	42	58	83	67	58	48	80	45	San Juan de Los Remedios.								
32	52	32	32	16	33	32	32	75	10	20	38	22	43	10	41	45	45	San Juan de Las Yeras.							
22	39	19	19	29	39	45	19	80	10	26	51	35	35	16	48	32	32	13	Santa Clara.						
76	55	70	51	78	100	85	73	134	64	80	105	99	89	70	100	89	48	70	51	Sancti Spiritus.					
26	65	45	45	18	13	26	29	54	16	10	22	16	33	10	22	39	58	20	26	80	Santa Isabel de Las Lajas.				
10	65	29	45	34	19	42	20	49	16	26	42	32	17	16	32	23	58	26	26	80	16	Santo Domingo.			
76	71	93	74	56	77	15	73	119	55	61	61	55	89	55	64	86	68	45	54	44	65	71	Trinidad.		
102	81	96	77	91	112	80	99	148	90	99	96	90	115	90	99	112	74	80	80	26	100	106	35	Tunas de Zaza.	
199	248	218	228	192	170	196	209	218	199	193	192	186	205	193	183	212	235	203	209	270	183	189	217	282	Havana.

PROVINCE OF SANTA CLARA.

LOCATION AND BOUNDARY.

This province occupies the center of the island of Cuba, in a region known as Las Cinco Villas (the five towns). It received this name on account of the five towns founded within the limits by Diego Velásquez.

On the north it is bounded by the Straits of Florida, separating it from the sand bank of Bahama; on the east by the province of Camagüey, on the south by the sea of the Antilles, and on the west by the province of Matanzas.

AREA AND POPULATION.

The area of the province is 9,560 square miles. It is about 215 miles long from east to west, taking its most western boundary and the extreme eastern point of the peninsula of Zapata, and 80 miles wide from its extreme points north and south.

The population is 457,431, divided as follows: Native white, 63.9 per cent; foreign white, 8.6 per cent; colored, 27.5 per cent; or white, 72.5 per cent; colored, 27.5 per cent.

JUDICIAL AND MUNICIPAL DISTRICTS.

The province is divided into six judicial districts, viz, Santa Clara, Sagua la Grande, Remedios, Cienfuegos, Trinidad, and Sancti Spiritus. It is also divided into 27 municipal districts or townships, viz, Caibarien, Calabazar, Camajuaní, Cienfuegos, Cruces, Esperanza, Lajas (Santa Isabela de Lajas), Palmira, Placetas, Quemado de Güines, Rancho Veloz, Ranchuelo, Remedios (San Juan de los Remedios), Rodas, Sagua la Grande, Sancti Spiritus, Santa Clara, Santo Domingo, Trinidad, Vueltas (San Antonio de las Vueltas), Yaguajay.

PROVINCIAL GOVERNMENT.

There is a governor and a provincial council of eight members, who are duly elected. Each municipal district has a mayor and a municipal council.

CAPITAL AND PRINCIPAL TOWNS.

The capital of the province is Santa Clara. The other important towns of the province are Cienfuegos, Sagua la Grande, Sancti Spiritus, San Juan de los Remedios, and Trinidad. The latter was the second city founded by Velásquez.

GEOGRAPHY AND TOPOGRAPHY.

The province is in general level. This applies to the northern portion, the cane-producing zone of Cienfuegos in the west and the savannas of Sancti Spiritus in the east. The southwestern part of the province is an immense swamp, a part of the Ciénaga de Zapata.

There are various mountain groups which may be divided into two principal formations; one a ridge of hills and mountains which runs parallel to the north coast, and the other a compact mass of highlands extending as far as the south coast. The northern mountain range is composed of the Jumaguas and Sabana groups. These two groups are separated by the Sagua la Grande and Sagua la Chica rivers. The Jumaguas group is small and comprises the Sierra Morena and the Jumaguas Hills west of the Sagua la Grande. Between the two Sagua rivers are some elevations which join this group with the Sabana or Remedios group. To the last-named group belong the Lomas de Santa Fé near Camajuaní, the Sierras de Bamburanao and Matahambre to the south of Yaguajay and also the Jatibonico Mountains, the source of the Jatibonico del Norte and Jatibonico del Sur rivers, which form the natural boundary between the provinces of Santa Clara and Camagüey.

The main portion of the central range of mountains is made up of the Cubanacán and Guamuhaya groups, and the sierras and hills of medium size which are situated in the center and southern portions of the province between the cities of Santa Clara, Cienfuegos, Trinidad, and Sancti Spiritus.

The Cubanacán group is formed by the Santa Clara Hills, such as the Cerro Calvo and others near the city. Farther south are Sierra Alta and Sierra del Escambray in which the principal rivers of this region have their sources.

Separated from the above-named hills by the Arimao Valley are the hills of Guamuhaya. This group is again crossed by the Agabama Valley, forming the so-called hills of Trinidad and Sancti Spiritus.

The Trinidad chain is formed by the Sierra de Saguanea in the north and Pico Blanco and Cabeza del Muerto or San Juan in the south, while in the center are the Lomas de Trinidad. The summit of this group, as well as of the entire Santa Clara region, is called Pico de Potrerillo, situated north of Trinidad and having an elevation of about 2,850 feet.

Within the valleys of the Agabama and Zaza rivers is found the Sancti Spiritus system of hills, the most noted being the Sierra de Banao, elevation, 2,550 feet; Lomas de Ponciano, del Obispo, del Helechal, and many others.

RIVERS.

The northern watershed of the province is formed by rolling prairies extending as far as the Sierra del Escambray, the source of the most important rivers of the south coast.

The Sagua la Grande has a 93-mile course and is navigable for about 20 miles. This river passes through Santo Domingo, Sitiecito, and Sagua la Grande, emptying into the sea at La Isabela or Boca de Sagua. The Sagua la Chica is 65 miles long, has a good roadstead, and is navigable as far as El Santo. The Jiquiabo and Yabú are feeders of the Sagua la Grande, while the Camajuaní River, which irrigates the rich tobacco plantations in the Camajuaní Valley, is a tributary of the Sagua la Chica. The balance of the rivers on the north coast are short in length, due to the fact that the hills of the Sabana range are but a short distance from the coast.

On the boundary line between Santa Clara and Camagüey are found the rivers Jatibonico del Norte and Jatibonico del

Sur which rise from the springs called Los Regaderos de Palmaritos on the southern slope of the Jatibonico Mountains. The Jatibonico del Norte crosses the mountains through a subterranean channel about 2½ to 3⅛ miles long and reappears on the northern slope in the form of a waterfall, continuing its course toward the north coast.

The southern watershed is divided into three portions. The first is a very fertile plain and is irrigated by the Damují, Salado, and Caunao rivers, which have their outlets near the port of Cienfuegos. The largest of these rivers is the Damují which is navigable as far as Rodas, a distance of about 18 miles. The next portion of the watershed is very much broken up and is traversed by the Río Arimao and Río Agabama which come from the Sierra del Escambray.

The first-named river irrigates the tobacco fields of Manicaragua and has its outlet near the port of Cienfuegos after being joined by the Hanabanilla, famous for its numerous cascades.

The Agabama or Manatí River divides the Trinidad and Sancti Spiritus groups and has for a tributary the Río de Ay, also noted for its beautiful waterfalls.

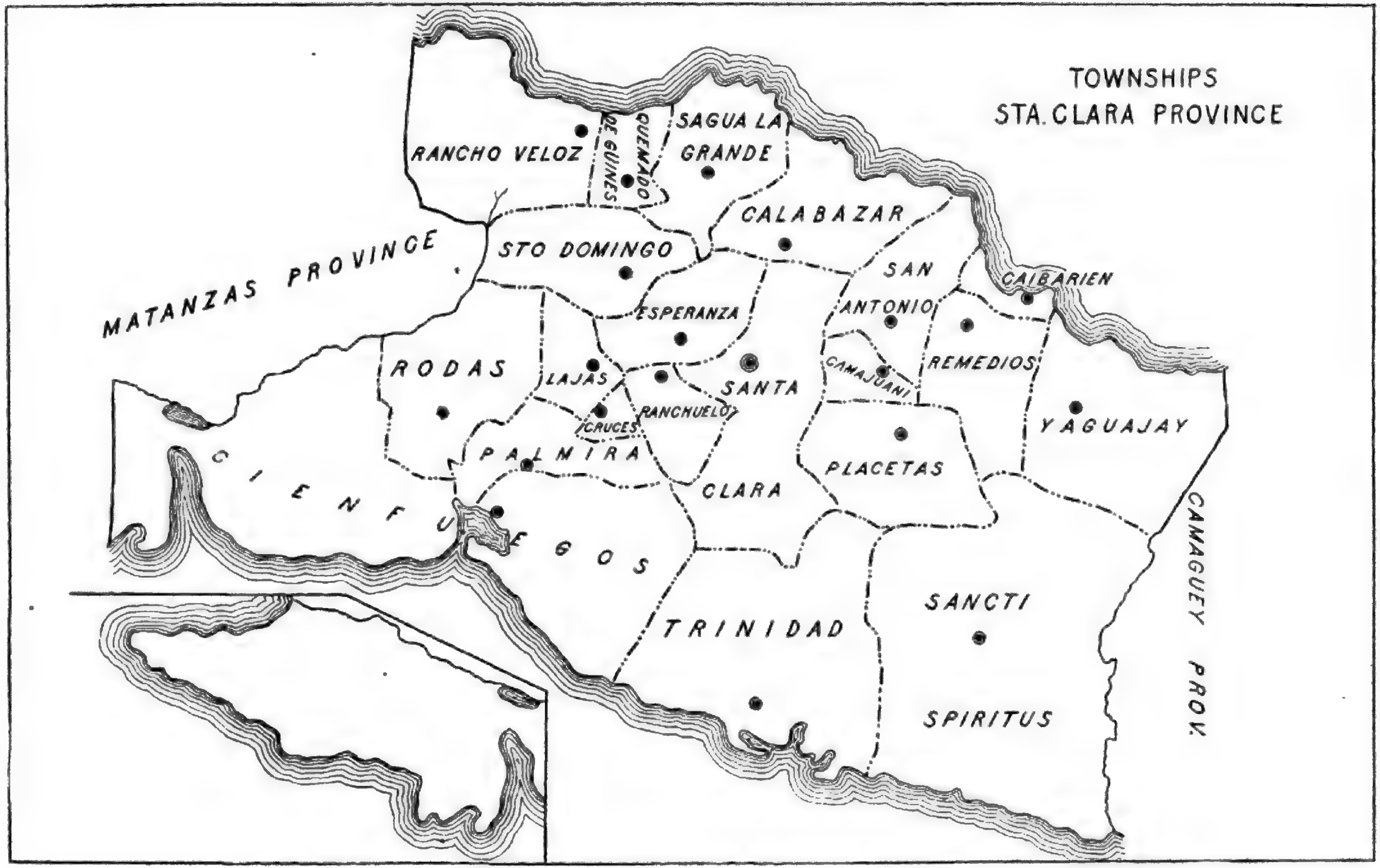
The prairie land lying between the rivers Zaza and the Jatibonico del Sur constitutes the third portion of the watershed. The headwaters of the Zaza are near Placetas. It is about 93 miles long and enters the sea near Puerto de Tunas.

The Jatibonico del Sur forms part of the boundary line between Santa Clara and Camagüey.

COAST LINE.

To the north of the entire coast line is a continuous succession of cayos and small islands forming an immense archipelago, fortunately interspersed with four or five good channels. The coast proper, with the Bay of Santa Clara and the Cayo de Cinco Leguas as its western boundary line, is marked by an extensive plain called Sabanas Anegadizas. Going eastward there is an endless series of embarcaderos (landing places) and estuaries until the extreme northeastern portion of the coast is reached. To the north of this portion is the large Cayo Fragoso.

The southern coast at its extreme southeastern part has a large shoal in which are situated several cayos and one of


TOWNSHIPS
STA. CLARA PROVINCE

the termini of the military trocha El Júcaro. Thence going eastward one encounters small inlets and coves until the mouth of the river Guaurabo is reached. Between this latter point and the Bay of Jagua or Cienfuegos occurs this same succession of inlets, coves, and caletas (small creeks).

A little to the west of the Bay of Cienfuegos commences the celebrated Ciénaga de Zapata, which forms about 60 miles of the coast line of the province of Santa Clara. Its Spanish name, Zapata, indicates its shape, that of a shoe. This marsh juts out into the sea in the form of a peninsula, forming on its north the Ensenada (inlet) de la Broa. This marsh is indented by the Bay of Cochinos, which almost divides it into two parts, the eastern part being named Ciénaga Oriental de Zapata and the western part Ciénaga Occidental de Zapata.

AGRICULTURE, INDUSTRY, AND COMMERCE.

The principal products of the province are sugar cane, tobacco, coffee, cocoa, corn, bananas, honey, wax, timber, alcohol, cattle, charcoal, and bark and leaves for tanning.

Cienfuegos has a fine harbor and is a place of commercial activity, being the center of the sugar trade for the south of the island. Sugar and tobacco are exported to the United States.

JUDICIAL DISTRICTS AND MUNICIPAL DISTRICTS.

Judicial district.	Township.
Cienfuegos	Cienfuegos.
	Cruces.
	Palmira.
	Rodas.
	Santa Isabel de las Lajas.
Sagua la Grande	Quemado de Güines.
	Rancho Veloz.
	Sagua la Grande.
	Santo Domingo.
Sancti Spiritus	Sancti Spiritus.
San Juan de los Remedios	Caibarién.
	Camajuaní.
	Placetas.
	San Antonio de las Vueltas.
	San Juan de los Remedios.
	Yaguajay.

PROVINCE OF SANTA CLARA.

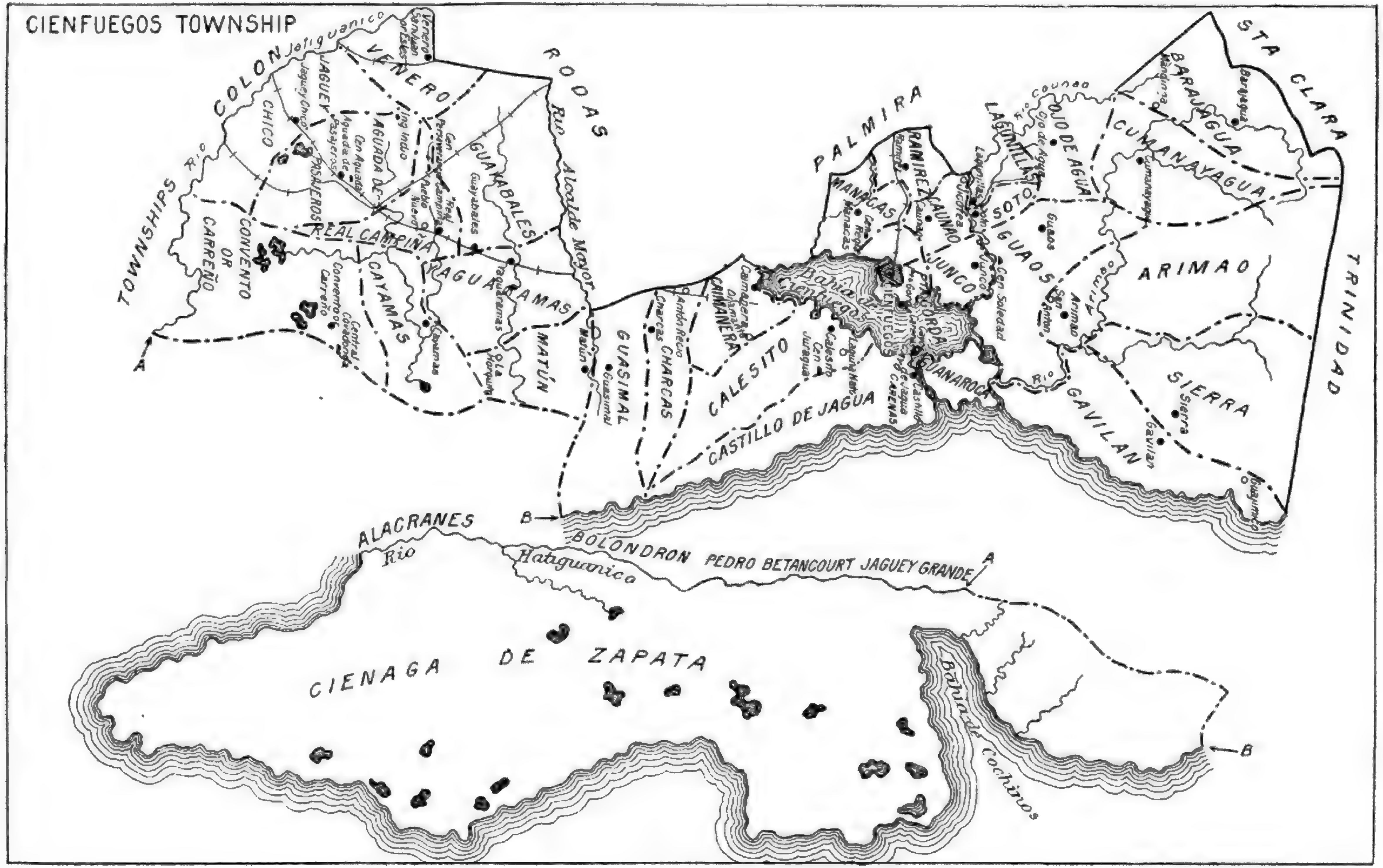
Judicial district.	Township.
Clara	Calabazar.
	Esperanza.
	Ranchuelo.
	Santa Clara.
dad	Trinidad.

JUDICIAL DISTRICT OF CIENFUEGOS.

ship:	Population
ienfuegos	70, 416
ruces	10, 239
almira	15, 750
odas	22, 083
anta Isabel de las Lajas	11, 407

TOWNSHIP OF CIENFUEGOS (CAPITAL, CIENFUEGOS).

n, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
gos	El Paradero	Urban		8,676
	La Aduana	do		7,744
	Mercado	do		6,104
	Pueblo Nuevo	do		7,416
a de Pasajeros	Aguada de Pasajeros	Rural	32	3,486
	Arimao	do	12.6	1,208
Antón.				
gua	Barajagua	do	24	1.015
ndinga.				
era	Caimanera	do	6	649
amante.				
	Calesito	do	3	631
guna del Hato.				
	Carreño or Convento	do	29	1,810
de Jagua	Castillo de Jagua	do	8.5	1,051
	Caunao	do	5¼	2,732
otea.				
as	Cayamas	do	24	1,090
arenas	Cayo Carenas	do	4.5	181
	Ciénaga de Zapata	do	46	476
s	Charcas	do	13	867
tón Recio.				
ayagua	Cumanayagua	do	17.5	4.106
n	Gavilán	do	19.8	451
ajimico.				
roca	Guanaroca	do	6.2	572
	Guaos	do	9	2,700
abazas.				
nal	Guásimal	do	15	592
bales	Guayabales	do	22	890
Chico	Jagüey Chico	do	37	921
	Junco	do	17	796
llas	Lagunillas	do	7	98
as	Manacas	do	4	2.536
	Matún	dó	17	807
Horquita.				
Agua	Ojo de Agua	do	17	915
Gorda	Punta Gorda	do	2.5	436
ez	Ramírez	do	6	1,060
ampiña	Real Campiña	do	26	2,547
eblo Nuevo.				
	Sierra	do	20	1,094
	Soto	do	6	390
San Juan or Esles.	Venero	do	30	1,170
ramas	Yaguaramas	do	20	3,039


CIENFUEGOS TOWNSHIP
COLON
Jatiguanico
TOWNSHIPS
Rio
RODAS
Rio Alcalde Mayor
CONVENTO OR CARREÑO
CHICO
JAGUEY
PASAJEROS
AGUADA DE
VENERO
REAL CAMPIÑA
GUAYABALES
CAYAMAS
AGUARAMAS
MATÚN
GUASIMAL
CHARCAS
CAIMANERA
CALESITO
CASTILLO DE JAGUA
PALMIRA
MANACAS
RAMIREZ
CAUNAO
JUNCO
LAGUNILLAS
SOTO
GUAOS
OJO DE AGUA
Rio Caunao
BARAJAGUA
CUMANAYAGUA
ARIMAO
Arimao
SIERRA
GAVILAN
Rio
TRINIDAD
STA CLARA
Bahia de Cienfuegos
CIENFUEGOS
CANAROCA
A
B
ALACRANES
Rio
Hatiguanico
BOLONDRON
PEDRO BETANCOURT
JAGUEY GRANDE
CIENAGA DE ZAPATA
Bahia de Cochinos

Cienfuegos.—Town. The city is situated on the south coast of the island in latitude 20° 7′ 11″ N., and longitude 80° 27′ 11″ W., and is 196 miles from Havana. It is on the east side of the harbor of Jagua and about 5 miles from the entrance. The Damují River is about 6 miles to the west, while the Arimao River is about 7 miles to the east. Both these rivers are navigable by small launches. Four wards or urban barrios make up the city.

Cienfuegos is undoubtedly the most important port on the southern cost of Cuba. A great deal of sugar and much tobacco is shipped to the United States.

Population, 30,100.

Water supply: The present water-supply system is owned by Señor Francisco Madrazo, a Cuban, living in Cienfuegos. The supply is entirely inadequate and believed (by army surgeons) to be unfit for drinking purposes except when boiled. The source of supply is several large springs at a place called Candaleria, about 3 miles northeast of town and situated between the Cuban Central Railroad tracks and the Cienfuegos-Caunao wagon road. (Candaleria is a farm.)

The springs forming the supply have been opened by digging a hole 60 by 60 feet and about 30 feet deep. At the deepest part of the hole the water is about 16 feet deep, and at the northwest corner about 3 feet deep. The water is pumped from the hole by two Blake's donkey pumps, run by a steam boiler of probably 20 horsepower. The water is then forced through an 8-inch main across the fields to the Cienfuegos-Caunao wagon road (about two-thirds of a mile) and along that road to the reservoir at the edge of the city. The reservoir has an elevation of about 53 feet above the sea. It consists of two tanks, each one being 100 feet long, 66 feet wide, and 15 feet deep. The tanks are separated by a brick wall about 2 feet thick. The eastern tank is so arranged that water may be turned into the other. Both have the same elevation. Above and about 8 feet from the sides of the reservoir there is a concrete wall about 1 foot in thickness and 8 feet in height. The walls are nicely whitewashed and everything is neat and clean.

From the reservoir the water is distributed about the city in pipes of various sizes, the pipe leaving the reservoir being 8 inches in diameter. There seems to be no particular system of piping. The pipes are near the ground, constantly breaking and flooding the streets and seem to be old and rotten.

Only the best houses in the city are supplied with water from the city mains. Probably all the best houses have cisterns from which drinking water is obtained. Most of the poorer houses have cistern or rain-water tanks of some kind. When their supply becomes exhausted they may get water from one of the 5 public spigots in the city, or purchase it from the water-cart man. Water carts pass up and down the streets several times each day.

The main from the pumping station to the wagon road is simply laid upon the ground. Along the roadway it is buried about 3 feet deep, but there are several places along the road where the pipes are in plain view. The pipes along the road follow the west side of the roadway, about 20 feet from the driveway.

Formerly the water supply came from the Jicotea River, about 7 miles northeast of the city. The pumping station at that place was destroyed during the 1906 insurrection. The water from the Jicotea River is said to be bad and is considered worse than the present supply. A description of the proposed new water supply is on file in the Second Section, General Staff.

Sewerage: The city is without a sewer system. Only a few isolated drains find their way to the bay, the bulk of the sewage being confined to cesspools, while slops and cooking water are thrown upon the streets. Nearly every house has its privy in the back yard, generally quite close to the kitchen. Large buildings have cesspools, which are sometimes emptied and cleaned. Rubbish is collected by carts every night.

Electric lighting: A plant at the northwest corner of Dorticos street and Independence avenue. The plaza (10 lights) and only one or two street corners are lighted by arc lights.

Five hundred and thirty-eight buildings in the city are lighted by electricity. Daily capacity of the plant is claimed to be 200 kilowatts. Main engine is of the Corliss type, horizontal, with 300 horsepower. There is also a secondary battery of the same capacity. The three-wire system is in use. Direct current of 120 volts.

Gas system: On the streets of Cienfuegos there are 516 gas lights. On the principal streets there is a light at each end of the block and one in the middle. The lights are in glass frames and about 12 feet above the sidewalks.

Some 603 houses in the city are lighted by gas.

The gas tank and factory is on the Paseo de Antonio Maceo at calle de Palacios, southwest of the railroad station.

The gas mains vary in size from 10-inch to 1-inch. At places the smaller pipes are exposed to view of persons traveling on the streets. The gas tank is 14 feet high, 72 feet in diameter, and has a capacity of 50,000 to 60,000 cubic feet of gas daily. Another tank of the same size may be installed in the near future (1907).

Two hundred and thirty-three oil lamps are also used by the city in lighting the streets.

Barracks or buildings suitable for same: Troops arriving at Cienfuegos in the night could bivouac as follows:

(*a*) At the custom-house pier. At this place is a shed 24 by 225 feet, which could accommodate, for bivouac purposes, at least 150 men. The two piers would also accommodate 300 men. The piers are not covered, but during the dry season would be a very good place for men for one night. Horses of two troops of cavalry could be picketed on lines in the streets in the immediate vicinity without interfering with the regular traffic.

(*b*) At the Cuban Central Railroad station there is sufficient ground for the bivouacking of 200 men, and there is a sheet-iron shed with concrete floor which would accommodate 100 men. The ground would be bad during the rainy season or right after a rain. About 65 horses could be corraled at the railroad company's stock yard, 300 yards south of the depot.

(*c*) At the corner of Dorticos street and Independence avenue is ground for the temporary camp of two troops of cavalry or four companies of infantry. There is a 5-foot fence around the grounds. The place could also be used during the dry season for the corral of a wagon train.

Buildings for barracks: 1. Jesuit convent, situated at Cid and Nicolás streets. The building occupies three sides of a city block; on the fourth side is the stable and yard. The building, of stuccoed brick, has a basement and two upper stories. The chapel occupies the western side, on Cid street. There are about 50 large rooms, 30 by 30 feet, with high ceilings, and a dormitory 89 by 15 yards. The dormitory has 60 small bedrooms, 8½ by 8½ feet. The partitions of these small bedrooms are of brick and are about 8 feet in height. The building is in good repair. Sanitary condition of locality is very good. Capacity is about 400 men. Water supply obtained from a well with windmill attachment and a large cistern. Two water-closet stools on second and third stories. Bathroom with 8 showers and 6 bath tubs, and 6 water-closet stools on lower floor. There are also one good kitchen and two dining rooms.

The institution has 187 boy pupils, 62 of whom board with the convent.

2. The barracks of the rural guard detachment stationed in Cienfuegos are at the northeastern edge of the city and on the highest ground in the city. There are 7 buildings and 4 stables described as follows:

(*a*) Guardhouse. A frame building with tar-paper roof, 18 by 15 feet.

(*b*) Harness room. A frame building with tar-paper roof, 6 by 8 feet.

(*c*) First sergeant's quarters. A frame building with tar-paper roofing, 18 by 15 feet.

(*d*) A frame building with tar-paper roofing, 115 by 27 feet. There is a 5-foot porch around entire building. Capacity, 50 men. Good repair, except roof, which needs repapering.

(*e*) Officers' dining room, officers' quarters, and kitchen. A wooden building, 156 by 21 feet, with tiled roof. There are three office rooms at the eastern end, each 15 feet in width. Officers' quarters consists of one room, 10 by 12 feet, just off the southwest corner of the building, with entrance from the office. The kitchen, 21 by 21 feet, is just in the rear (south) of the center of the building. All rooms in fair repair except the kitchen.

(*f*) There are four sets of wooden stable sheds. Each shed is 102 by 21 feet and arranged for 30 stalls; wooden floors. At the west ends of the stables are rooms, 15 by 21 feet, used as saddle rooms. At the east end of each stable is a room, 15 by 21 feet, for forage. Stables are in very good repair.

(*g*) Latrine. A wooden building, about 6 by 6 feet, and about 40 yards in rear of the fourth stable.

(*h*) Fort. This is described under fortifications. Buildings *a* to *e*, inclusive, are about 3 feet off the ground.

(*j*) Water supply: From the city reservoir. Private pipe from reservoir to the camp. Sufficient supply. Water should be boiled.

3. Public-school building. At Cuartel and Santa Cruz streets. The eastern half of the school, which is rectangular in shape, was originally the barracks of the Spanish garrison. The walls are brick, stuccoed, and the roofs of tiling. The western part, consisting of "L's" at the northwest and southwest corners of the old building, was built about 1902. These are frame buildings with tile roofs. All buildings, both old and new, are in excellent repair. The ceilings, of hard wood, are quite high, and every room is well ventilated.

The sanitary condition of the buildings and locality is excellent. There is a total of 33 rooms, 19 in the old buildings and 14 in the new buildings. Most of these rooms are large enough to comfortably quarter 15 to 20 men. Total capacity is 525 men.

Water supply: Two large cisterns and water from the Cienfuegos City Water Company. At present the cisterns are dry and the water company is not furnishing sufficient water for use in flushing water-closets (1907).

Water-closets: In the eastern section there are two rooms with water-closets, one with 9 stools and the other with 13 stools and a large urinal. In the western section there are two water-closet rooms, one with 10 and the other with 12 stools.

Note.—All buildings have wide porches on at least one side. Cement pavements throughout the grounds. The buildings of the school cover one complete city block.

A private sewer system goes to the bay.

Excellent place for hospital or barracks.

4. Provincial prison. At Santa Elena and Cuartel streets. The building, of stone, is rectangular in shape; roofs of tiling and floors of cement. There are 19 rooms, including the

kitchen and bath, from 8 by 12 to 25 by 30 feet. In good repair. Sanitary condition of building and locality is good. Capacity, 150 men. Water supply is obtained from a 1½-inch private pipe from the reservoir of the city water company, and a cistern for rain water. Sufficient supply. Sewerage—private line to the bay. There are 9 water-closet stools in the building.

Stables: 1. At 173 La Mar street, near O'Donnell; a frame building with 32 stalls. City water supply.

2. At 130 Cuartel street, corner of Castillo. Stable has 14 stalls.

3. At rural guard quarters, described above, are stalls for 120 animals. City water supply. Stable is built of cement and brick and is very well kept.

Transportation corrals: 1. A corral used by the police and sanitary departments is situated at the southern end of Calzada de Dolores. This place was formerly used as a market and was known as "Mercado No. 2." It occupies an area of 165 by 180 feet. It is estimated that 80 animals could be stabled in this corral by making a few repairs to the stalls and fitting up the west side.

Two gates enter the corral, one from the west side and the other from the south.

The southwest corner has one large and three small rooms in which 15 teamsters could be quartered. There is another small room at the southeast corner; could be used as a storeroom.

In the center of the corral is a stone watering trough with city water connections.

This place is recommended as a corral.

2. Grounds suitable for corrals: (*a*) At La Mar street and Independencia avenue is ground used by circuses and other show people. A 6-foot fence (wooden) incloses an entire block. A good place during the dry season. City water connections could be arranged. (*b*) On the east side of Independencia avenue just south of calle Campomanes is an open space used as a baseball ground. It is three blocks wide and two blocks in length. A good place in the dry season and probably good in wet weather. City water could be obtained.

Hospitals or buildings suitable for same: 1. Sanatorio Purísima Concepción. An institution organized by the Spaniards of Santa Clara Province. The hospital is being erected on the high ground at the outskirts of the city, at the eastern end of Zaldo street. It is expected that the buildings will be completed and the hospital in operation in November, 1907.

The hospital will accommodate patients as follows:

Ordinary sick	40
Patients requiring surgical care	20
Fever patients	40
Tuberculosis patients	10
Smallpox patients	10
Total	120

In an emergency an additional 70 patients could be cared for. The water supply for the institution will be a well at a point some 200 yards south of the last ward. This well is 35 feet deep and has 13 feet of water. The supply is said to be unlimited and of excellent quality. A large tank is to be erected about 100 yards in rear of the main wards and have a height sufficient to force the water to all parts of the institution. The grounds will be made into a park. The buildings will cost in the neighborhood of $100,000 and will have an elevation of 48 feet, with an excellent view of the bay and the city.

2. Civil hospital. At Independencia avenue and Cervantes street. The hospital occupies an entire city block and is one story in height. The eastern half is stuccoed brick, with tiled roofs and flooring. The western half is of wood with tiled roof. The hospital, while in poor repair, seems to be complete in every respect There is a good operating room, 21 ward rooms of various sizes, 6 iron-barred rooms for insane patients, laundry and sterilizing rooms, dining room, dispensary and storerooms. Capacity, 240 patients. Sanitary condition of building is poor, many buildings being old and in poor repair. Buildings are too close together. Locality is believed to be good.

Water is obtained from a large cistern, a well with windmill attachment, and water mains from the city water company; supply not sufficient. Water-closets can not be properly flushed on account of the shortage of water from the mains. There are 16 water-closet stools and 7 small bathrooms. There is a 6-inch sewer pipe from the hospital to the bay.

3. Spanish hospital. At the northeast corner of Santa Cruz and O'Donnell streets. That part of the main building fronting on O'Donnell street is of brick; all other buildings are of wood. All buildings have tile roofs. In poor repair. Sanitary condition of locality is very good, but the sanitary condition of the buildings is believed to be bad. Capacity, 126 patients. The yellow-fever ward will accommodate 10 patients. Water is obtained from a 1-inch private pipe direct from the reservoir of the city water company; sufficient supply; should be boiled for drinking purposes. There are 6 water-closets in the buildings; also a small bathroom. Gas is used throughout the hospital.

Upon completion of their new buildings the present site will be abandoned as a hospital.

4. Landa hospital. At the southeastern edge of the city at the junction of Florida Blanca and Cuartel streets. The building is of stuccoed brick and has a tile roof.

There is a large ward room, 40 by 40 feet; an operating room, 15 by 18 feet; 2 rooms, each 15 by 15 feet, which are used in connection with the operating room; 13 ward rooms, each 18 by 18 feet; 3 ward rooms, each 10 by 12 feet; a kitchen, 10 by 12 feet; and two or three small storerooms. All in good repair. Sanitary condition of buildings and locality is good. Ground occupied by the hospital is but a few feet above the sea level. Capacity, 80 patients. Water supply is obtained from a well with a windmill and cistern. Sufficient supply. Water from well should be boiled for drinking purposes. Rain water in cistern. There are four water-closet stools.

5. Convento Hermanas de los Pobres. On the corner of Cuartel and Cisneros streets. The building is of stone, with tiled roof and floors. It is rectangular in shape, with a patio in the center. There is a chapel, 40 by 60 feet; 2 rooms suitable for wards, each 25 by 80 feet; 3 rooms, 15 by 18 feet; two or three small storerooms, a kitchen, and bath. The building is in excellent condition. Sanitary condition of building and locality is very good. Capacity, 100 patients. The water

supply is from a windmill-well and a cistern. Sufficient supply. Six water-closet stools in the building.

Quartermaster and commissary storehouses, suitable buildings: During the cane-grinding season most of the storehouses of the city are filled, or nearly so, with sugar which is shipped to Cienfuegos from outlying places for transportation by water to the United States. By the middle of May the warehouses are empty, and remain empty until shipment of sugar begins with the next season.

1. At the southwest corner of Dorticos and Hourrutiner streets is a brick warehouse with tiled roof, 84 by 200 feet. There is a tramway running from the tracks, through the warehouse, out to the wharf. No platforms for unloading. The building, which is in good repair, is on a siding (Dorticos street) of the Cuban Central Railroad.

2. At the northwest corner of Dorticos and Hourrutiner streets is a brick storehouse occupying an entire block, including a yard in the center. The sides are about 100 feet in width. A tramway from the Cuban Central siding (on Dorticos street) to the storehouse. Six unloading platforms, 6 by 6 feet, on the Dorticos street side for unloading of cars. Building in good repair.

3. At the southwest corner of Dorticos and D'Clouet streets is a storehouse, 160 by 300 feet. Brick building with tiled roof. A tramway from the Cuban Central Railroad siding on Dorticos street runs through the storehouse and out to the pier. Three doors for unloading directly from cars. No platforms. Good repair.

4. At the northeast corner of Dorticos and D'Clouet streets is a brick storehouse, 100 by 100 feet, with tile roof. A tramway runs from the Cuban Central siding on Dorticos street to the storehouse, also a tramway south to a pier. Building in good repair.

5. At the northwest corner of the custom-house is a storeroom, 30 by 90 feet. Brick building with tile roof. Excellent storeroom, but small. No platforms for loading. Cuban Central Railroad siding, on Dorticos street, immediately in front of the storeroom. There is another room in the custom-house which could be used. This is a room, 60 by 120

feet, in the southwest corner of the building. Railroad siding within 30 yards of the storeroom.

6. At the southwest corner of La Mar and Santa Isabela streets is a shed, 90 by 270 feet, with a tile roof. Sides of shed are protected by iron bars. There is a tramway from the shed to the pier for receiving supplies from boats. Shed is on a siding (La Mar street) of the Cuban Central Railroad. Is bonded warehouse of custom-house. If empty might be used by troops temporarily; in good repair.

7. At the northwest corner of San Luis and La Mar streets is a brick warehouse, 120 by 270 feet, with a tile roof. Tramway from Cuban Central Railroad siding (on La Mar street) to storehouse; also a tramway from building south to pier. Building in good repair. Three doors for the unloading of cars.

8. At the southeast corner of La Mar and Casales streets is a brick storehouse, 90 by 270 feet, with tile roof. A tramway runs from the Cuban Central siding (on La Mar street) to warehouse; also a tramway from building to pier to the south. Five doors for the unloading of cars; no platforms; building in good repair.

9. At the southwest corner of Casales and La Mar streets is a brick storehouse, 150 by 150 feet; tile roof. Tramway from track on La Mar street to building. No platforms; building in good repair.

10. At the railroad station (west side) is a brick storehouse, 40 by 125 feet; tile roof. Siding alongside of building; no platforms. Building is used for storing sugar.

11. At Arenas street and Rafael Cabrera avenue is a storehouse. Building is 234 by 261 feet, with walls 40 feet in height. A standard-gauge railroad siding enters the building, permitting the entrance of the ordinary box car. Wagons can also drive inside the building. Building is new. No platforms on outside of building.

All the buildings mentioned above have good strong floors. Floors have a thick coating of sugar dirt, resulting from the leakage of the sugar sacks in handling.

Location of important offices: 1. Railroad station. On Paseo de Arango opposite Calle de Arguelles, three blocks west of the main plaza. Railroad telegraph office in freight building adjoining the passenger station.

2. Post-office. On west side of the main plaza and on the northwest corner of Juan O'Bourke (San Fernando) and Bouyon streets.

3. Government telegraph office: 101 Juan O'Bourke street, just west of the main plaza and in rear of the post-office building.

4. Telephone central. Gazel street No. 30, between Arguelles and Santa Clara streets.

5. Office Cuban Submarine Cable Company. No. 13 Calle Santa Ysabel, at the northwest corner of Santa Clara and Santa Ysabel streets, two blocks south of the main plaza.

6. Electric plant. On Independence avenue and Dorticos street.

The ice plant is on Dorticos street, one block west of Independence avenue. Daily capacity is 35 tons.

Camp sites, location, etc.: On account of the scarcity of water, the only suitable camp sites in the vicinity of Cienfuegos are near the Cienfuegos-Caunao wagon road, northeast of the city. The mains of the water company follow the road, and there is a small stream, the Arroyo del Ynglés, about one-half mile to the west of the road. Thus the water company could supply water for drinking and cooking and the stream the water for the animals and for bathing.

1. At a point about 2 miles out of town, on the west side of the Cienfuegos-Caunao road, there is a camp site suitable for a squadron of cavalry or a regiment of infantry. A fairly sandy soil with good drainage. Water for drinking and cooking from the mains of the water company, and water for animals and bathing from the creek, 500 yards to the west of the road. No wood in vicinity, but it could be furnished by natives. Grazing ground (private lands) for horses in immediate vicinity. This camp site was occupied by the American troops, but was abandoned on account of " scratches " among the horses.

2. At a point on the Caunao-Cienfuegos road, 3 miles northeast of Cienfuegos, is a camp site for a squadron of cavalry or a regiment of infantry. Ground well drained. Water for drinking and cooking from mains of water company, and water for animals and bathing could be obtained

at the creek, one-half mile to the west. Wood scarce, but could be supplied by natives.

3. On the ridge east of the rural guard barracks there is a suitable camp site for a squadron of cavalry or a regiment of infantry; good natural drainage. Water for drinking and cooking could be obtained from reservoir of the water company, which is on ground somewhat higher up the ridge. Horses could be watered at the creek, one-half mile to the west. Wood scarce, but could be supplied by natives.

Fortifications: All of the forts mentioned below, except the fort called "Zaragoza," situated just northeast of the barracks of the rural guard, are new and were built by the Government during the 1906 insurrection. All are in good condition.

Blockhouse situated at Valázquez and Concordia streets. Has 2 stories and is hexagonal in form, the sides being 12 feet in length and about 14 feet in height. The walls are of concrete and about 16 inches in thickness. There are two tiers of fire, the lower tier being about 4 feet from the ground and the upper tier 3 feet from the top of the fort, which is without a covering. Steep stairs in the center of the fort lead from the lower to the upper floor. The fort could accommodate about 12 men for firing purposes. There is a low wire entanglement from the swamp, 100 yards west of the fort, to the railroad bridge over the Arroyo del Ynglés. Entanglement passes immediately in front of the fort. Swampy ground to the north and west of the fort. Good field of fire for some 300 yards to the north, northeast, and northwest.

Blockhouse near the Cuban Central tracks, 40 yards north of Gloria street. Fort is hexagonal in form, the sides being 8 feet in length and 8 feet in height; board covering. Has a small wooden tower used as a lookout station. This fort commands the railroad to the north as far as the railroad bridge over the Arroyo del Ynglés. There are houses on both sides of the track for at least 50 yards to the front, limiting the field of fire to ground in the immediate vicinity of the railroad track. Walls are of concrete and about 1 foot in thickness.

Blockhouse known by the natives as No. 7 is at the junction of the Cienfuegos-Caunao road with the Camino de Manacas, being about 10 yards north of the latter road. The fort is hexagonal in shape, the sides being 14 feet in length and 14 feet in height, and has two stories. Upper story is not covered. This blockhouse could accommodate about 20 men for firing purposes. Walls are of concrete and about 16 inches in thickness.

Blockhouse on calle de la Lealtad, two blocks southeast of calle de la Unión. This fort was not completed. The walls are of concrete, 16 inches in thickness and 6 feet in height, and are arranged for a single tier of fire. It is hexagonal in shape, the sides being about 8 feet in length.

Fort called "Zaragoza" was built during the Spanish régime and is just northeast of the barracks of the rural guard. It is a twelve-sided affair and is about 100 feet in length and 35 feet in width. The walls are of concrete and about 18 inches in thickness and 12 feet in height. In the center of the fort is a frame building about 12 by 12 feet. Over the building is a sheet-iron sentry tower about 6 feet in diameter; it is loopholed, and 5 or 6 men could use it for firing. The fort commands the country to the north and east, having an especially good field of fire (600 yards) to the east. It occupies the highest ground in the city of Cienfuegos. Capacity for firing, about 60 men.

Fort at the northwest corner of Dorticos and La Gloria streets is a two-story concrete structure with walls 16 inches thick and 8 feet high. Two tiers of fire. It could accommodate about 12 men for firing. The fort has a field of fire to the east for about 300 yards. Ground to the east is higher than the ground occupied by the fort.

The fort in the center of the United States camp is a nine-sided affair, and has two stories, loopholed for one tier of fire each. It is about 50 feet in length and 20 feet in width. Over the southern end is a tower about 12 by 12 feet and 12 feet in height. The tower is loopholed for one tier of fire, and is covered by a board roof. The part not covered by the tower is without a roof, and is loopholed for one tier of fire, but men could fire over the top of the walls. The fort, which is on high ground, commands the road to Junco and the country to the east.

Two-story, twelve-sided fort; loopholed for two tiers of fire, one tier in each story. The walls, of concrete, are about 16 inches in thickness and 14 feet in height, the sides being about 6 feet in length; board roof. The fort is on high ground, and, in addition to commanding the road Playa Alegre, commands the country to the east for about 600 yards. The fort could accommodate about 15 men for firing.

Fort on calle de Cuartel, about 100 yards south of "Quinta de Salud San Rafael." Hexagonal in form, the sides being 12 feet in length; walls, of concrete, are about 14 feet in height and 16 inches in thickness; fort has two tiers of fire, one from the lower story and one from the upper; men could also fire over the walls of the upper story, which is not covered. The fort commands the country from the bay to the grounds occupied by the new Spanish hospital. About 15 men could be accommodated for firing.

In addition to the forts above mentioned there are signs of a fort having been traced at a point midway between the two forts last described. For some reason nothing but the foundation was completed.

Railroads: The Cuban Central Railroad is the only railroad coming into the city of Cienfuegos. The station, passenger, and freight offices front on Paseo de Arango, opposite Arguelles street, three blocks west of the main plaza. The offices, sidings, and shops occupy about six blocks.

The sidings consist of five tracks about 300 yards in length and two or three short branches leading to the coal yards and repair shops. In addition to these sidings a single-track branch line goes down La Mar street to Santa Ysabel street; this line is used for sending supplies to the large warehouses along the water front. A second line goes down Dorticos street to Independence avenue and is nine blocks in length; the last four blocks of this line is a double track. The line is used for hauling supplies to warehouses and to the electric-light plant. A third branch line goes west down Rafael Cabrera avenue to the railroad pier, some eight blocks; the last four blocks of the line is a double track. At Arenas street a short spur leaves the line and enters a large storehouse.

Loading of stock: At the southern end of the east siding there is a small corral with a stock chute, from which animals are loaded and unloaded. Only one door of a car can be loaded at a time. From the platform at the freight depot four cars can be loaded at once. The platform is the same height as the floors of the cars, and extends out to within 2 feet of the car doors. This space could be bridged and the horses led right into the cars.

Watering places: The nearest watering place for animals is at the Arroyo del Ynglés at the northeast corner (edge) of the city and about 1½ miles from the railroad station. This watering place is on the camino de Manacas. About 50 horses can be watered at a time. There are no public watering places for animals in town.

Storehouses: None suitable at depot. The one situated at Arenas street and Rafael Cabrera avenue, heretofore described, is the best in town. A standard-gauge track enters the building. Wagons can also enter. The building is new.

The passenger station is a single-story frame building, about 150 feet long and 40 feet wide. The freight station is a two-story concrete building, about 75 feet long and 30 feet wide. The upper story is used for telegraph office, yard official's office, and for living quarters for some employees. The lower floor is for freight. The building is dirty and in poor repair upstairs. The platform is about 2½ feet high and is covered by an iron shed. Platform is about 26 feet wide and 80 feet long.

Facilities for loading and unloading: 1. For animals as above mentioned.

2. For troops at the station and sidings as above mentioned.

3. Supplies may be loaded from wagons at the freight-house platform, the east siding near the freight house, and at the branch lines already mentioned.

Bus lines run to Manacas and to Caunao and Los Guaos.

Roads leading out of town: 1. Road to the northwest leaves the calzada de Dolores at the outskirts of the city. This road goes to Manacas, Palmira, Abreus, and Rodas.

2. Road leaves the northeast corner of the city, from calzada de Dolores, for Caunao, Los Guaos, Ciego Alonzo, Camarones, Palmira, Ojo de Agua, and Cumanayagua.

3. Road leaves the eastern side of the city on calle Zaldo for Punta Gorda, Junco, and Esperanza. It is about 6 miles to Esperanza, which is near the Arimao River. There is no bridge at the river and the road ends at this point.

Best line of approach for attack: The part of the city most difficult to defend lies between the fort called "Zaragoza" and the one in the center of the United States camp herein described.

Aguada de Pasajeros.—Barrio and town. Ingenio Indio and central Aguada are in the barrio. The town is on the Cárdenas and Júcaro Railroad, 32 miles northwest of Cienfuegos, and is the terminus of the western branch of the Cuban Central Railroad. It consists of about 300 houses and has a large sawmill. Population, 1,452. Water supply obtained from wells. Location is healthful. There are 2 wooden blockhouses near the Cárdenas and Júcaro Railroad station. Town would hold about 1,000 men if houses were seized.

Arimao.—Barrio and village. The barrio is southeast of Cienfuegos, and besides the village bearing its name contains the village of San Antón.

The village of Arimao is on the Arimao River, about 21½ miles by road from Cienfuegos and 6 miles south of Soledad. It has a population of about 350. Water supply is obtained from the Arimao River and is plentiful at all times of the year. For drinking purposes the quality is poor, because of contaminated watershed. It is distributed by carts and sold from door to door. No sewer system and no system of lighting. There are 3 buildings that could be used for storehouses or barracks. One would be suitable for a hospital. Capacity, all told, about 200 men. Telephone central and post-office on street running to Gavilán. Three ruined concrete blockhouses.

San Antón.—Village. A place of no importance, situated in the barrio of Arimao. Buildings consist of small thatched shacks, except one store, which is built of concrete.

Barajagua.—Barrio and village. Besides the village bearing its name, the barrio contains the sitio of Mandinga. The village is about 6 miles east of Cumanayagua and 24 miles by road east of Cienfuegos. Consists of a few old native houses, a school, and a store. No telegraph or telephone. Water supply from Arroyo del Muerto; plentiful at all seasons; very poor quality; carried in cans. The schoolhouse will accommodate one troop and is in good condition. Water would have to be carried from the river. Suitable grazing ground near the Arroyo del Muerto, southeast of village. Camping grounds numerous and easily selected on the ground. Plenty of wood, water, and grass for a large force. Roads south to Hanabanilla, southwest to Cumanayagua, west to Mandinga, and east to Manicaragua.

Mandinga.—Sitio. Situated 4 miles north of Cumanayagua and 21 miles by road northeast of Cienfuegos. Consists of a few small native huts. Water supply plentiful; secured from Arimao River and wells. Wood scarce; grazing plentiful.

Caimanera.—Barrio and village. The barrio is west of Cienfuegos and contains the village of Diamante besides the one bearing its name. The village is situated 6 miles from Cienfuegos, across the bay, and 8 miles south of Abreus, on top of a hill which overlooks the bay. It consists of 30 houses and has a population of about 100. Most of the inhabitants are field hands. The country in the vicinity is very rich for sugar cane.

Diamante.—Village. A colonia of the ingenio Cieneguita, 2 miles southwest of Caimanera on the Cieneguita Railroad and 7 miles from Cienfuegos. It consists of a store and 35 houses. It has a siding to load cane cars. Population, about 100.

Calesito.—Barrio and village. The barrio also contains the sitio of Laguna del Hato. The village is on Cienfuegos Bay. Consists of 7 houses and a sugar warehouse for the ingenio Cieneguita. The Cieneguita Railroad has its terminus at this point. There is a pier 50 yards long, from which the sugar made at the Cieneguita mill is shipped.

Laguna del Hato.—Sitio. A small place 2½ miles east of Juraguá and 5 miles southwest of Cienfuegos. It derives its name from a small pond in the vicinity, and consists of a store and 3 houses.

Carreño or Convento.—Barrio and village. Central Covadonga is in the barrio. The village is 6 miles southwest of Real Campiña and 29 miles northwest of Cienfuegos. Formerly called and now better known as Convento. Consists of 28 small thatched houses, and has a thousand-gallon water tank and a cane-loading railroad spur. Has a post-office.

Castillo de Jagua.—Barrio and village. Central Juraguá is in the barrio. The village is situated on the west side of the entrance to Cienfuegos Bay. It is a summer resort for residents of Cienfuegos. Many of the houses remain vacant for many months of the year. The water supply is obtained from wells and rain water is also collected in cisterns. Quality of well water is apparently good and the quantity is abundant. A large cistern in the southwest part of the village has a capacity of 50,000 gallons. Buildings which could be used to shelter troops are an old castle containing barracks, capacity 150 men; and the municipal building, 100 men. There is also a summer hotel which would hold 75 men.

Caunao.—Barrio and village. The barrio contains the sitio of Jicotea besides the village bearing its name.

The village is 5¼ miles northeast of Cienfuegos. Population, about 500. Water supply is obtained from wells in private yards. The water is excellent and in sufficient quantity for 1,000 men. This water is sold in Cienfuegos for table water. Animals can be watered at a branch of the Caunao River, 1,000 yards northeast of village. No sewer system. Lighted by lamps. There is no telegraphic communication. Telephone communication with Cienfuegos, Soledad, and Los Guaos; six telephones in the village. No suitable barracks, although private houses could be seized and would accommodate 300 or 400 men. No stables. There is one old dilapidated blockhouse near southern entrance of village. No railroads. Roads lead out of the village north to Santa Rosa, east to Lagunillas, west to Manacas, and southwest to Cienfuegos. The best line of approach for attack is from the south and west.

Jicotea.—Sitio. A colonia of the Hormiguero plantation. 7½ miles northeast of Cienfuegos. Population, about 42. Consists of 6 houses and a small general merchandise store. A branch of the Hormiguero Plantation Railroad, with a single-wire telephone line, runs to this place. Water supplied by a well with a windmill attachment. Sufficient for the needs of the people and of good quality.

Cayamas.—Barrio and village. The barrio is a rural district west of Cienfuegos. The village is a much scattered settlement situated 24 miles northwest of Cienfuegos. It consists of about 30 small wooden buildings. Has a small store and a post-office. Connected by rail and telephone with La Rosita.

Cayo Carenas.—Barrio and village. Situated on an island in Cienfuegos harbor, about 2 miles north of entrance and about 4½ miles south of the city of Cienfuegos. Used as a summer resort by residents of that city. Working class of permanent residents engage in fishing for a living. Interior and northeast portion of island void of houses, with exception of an occasional hut along water front. Island oval in shape, gradually tapering to a point at northeast end. About 1⅛ miles long, and 675 yards wide. Sea wall of stone and cement on north and west sides, natural limestone, and piles on south and east. Permanent population about 200. During summer number would increase to about 450. Water supply obtained from tanks for rain water. No sewer system. Majority of houses have their own acetylene gas plant. There are really no buildings suitable for barracks, although a house at northeast end of village and 4 houses along water front on south and west side could be used in emergency. Water supply from tanks for rain water; quantity dependent upon amount of rainfall. No sanitary improvements. Would accommodate about 150 men. The house at northeast end of village would be suitable for a hospital. A store at southwest end of village, and a dance pavilion at south end near water front, could be used as storehouses. Ground in interior of island not suitable for camping.

Boats of the Trujillo & Co. steamship line make regular trips to island daily. A small wharf at north end and one at southwest end of island. Small boats not drawing more than 7 feet of water can make landing. Island has no defensive positions.

Ciénaga de Zapata.—Barrio. The barrio lies west of Cienfuegos, and a full and complete description of it is given under the general heading of Ciénaga de Zapata.

Charcas.—Barrio and village. Within the borders of the barrio are the sitio of Antón Recio and the village bearing its name. The village is 8 miles southeast of Yaguaramas and 13 miles west of Cienfuegos. It consists of 2 stores, 7 frame buildings, and 13 native huts. Water is obtained from 3 wells. It is the meeting point for laborers working in the cane fields of the vicinity. In the center of the village is a brick blockhouse about 20 feet high and 15 feet square at the base; now occupied and used as a store.

Antón Recio.—Sitio. Situated 7 miles southwest of Abreus, and 9½ miles northwest of Cienfuegos. Apparently a new village which came into existence as a result of the extension of the Cárdenas and Júcaro line. It consists of a frame railroad station, 2 stores, and 3 frame buildings.

Cumanayagua.—Barrio and village. The village is 17½ miles northeast of Cienfuegos and has a population of about 800. Water is obtained from wells, a creek one-fourth mile east of village, and from the Arimao River, 1 mile west, during the dry season. The only buildings suitable for barracks are rural guard quarters and a tobacco warehouse in the center of village. Both would shelter 150 men.

Gavilán.—Barrio and village. The barrio is southeast of Cienfuegos and contains the sitio of Guajimico. The village is situated 19 miles from Cienfuegos on the main highway between Cienfuegos and Trinidad. It consists of 2 stores (wooden buildings), a small schoolhouse (wooden), and 3 or 4 shacks scattered near by. It is important in that the surrounding country is open, rolling, and excellent pasture land, making a good camp site for an army. Two rivers, the Gavilán and Guanábana, are near by, and several small creeks flow into these. Access to the mountains lying north and east is had by the foot trail leading due east from this point.

Guajimico.—Sitio. On the Cienfuegos-Trinidad highway, 4½ miles southeast of Gavilán and 21 miles southeast of Cienfuegos. Consists of a store and 3 or 4 scattered houses. Farming and grazing lands in vicinity.

Guanaroca.—Barrio and village. Village is on the north bank of the Arimao River and about 8 miles east of Pasacaballos, on the Pasacaballos-Sierra trail. Consists of about 20 small houses. Population, about 100. Water from wells.

Guaos.—Barrio and village. The village is 9 miles by road southeast of Cienfuegos. It has a population of about 800. Water obtained from wells for drinking purposes, and from creek, 100 yards north, for animals. There are about 7 buildings which would be suitable for quarters in an emergency. Telephone to Cienfuegos, Soledad, and Caunao. The barrio also contains the village of Calabazas and central Soledad.

Calabazas.—Village. This place is a scattered settlement lying between the mouth of the Arimao River and the mouth of the Caunao River, about 6 miles from Cienfuegos. A small arm of the Bay of Cienfuegos runs into it for about 1 mile, and is known as the Bay of Calabazas.

Guásimal.—Barrio and village. The village is 7 miles southeast of Yaguaramas and 15 miles west of Cienfuegos. It consists of a store and 16 houses. Water obtained from 6 wells.

Guayabales.—Barrio and village. The village is about 22 miles northwest of Cienfuegos and is a small unimportant settlement consisting of 10 houses.

Jagüey Chico.—Barrio and village. The village is about 3½ miles northwest of Aguada de Pasajeros on the U. H. R. R., and 37 miles northwest of Cienfuegos. Consists of 2 stores and about 12 houses. There is a long railroad siding at this point. Water obtained from wells.

Junco.—Barrio and sitio. The sitio is a small cattle ranch 5½ miles southeast of Arimao and 17 miles by road southeast of Cienfuegos. Two wooden houses; 6 inhabitants. Water from stream near by. Apiary along banks of stream at ford near Junco.

Lagunillas.—Barrio and village. The village is on both banks of the Caunao River, about 7 miles northeast of Cienfuegos. Population, about 80, principally negroes. Water supply obtained from Caunao River. River about 10 feet deep at bridge and about 150 feet wide; water clear. No buildings suitable for troops. Suitable ground along river for small camp sites, but fuel is scarce. On east side of the village are hills which command it.

Manacas.—Barrio and sitio. The sitio is a small settlement, about 4 miles northwest of Cienfuegos, consisting of 2 stores and 3 houses. Water from Río Salado. Central Nuestra Señora de Regla is in the barrio.

Matún.—Barrio and village. The barrio is west of Cienfuegos. The village proper is about 17 miles west of Cienfuegos and consists of a store, a windmill with a 150,000-gallon water tank, and about 25 houses. The barrio also contains the village of La Horquita.

La Horquita.—Village. Situated 5½ miles southwest of Yaguaramas and 21 miles northwest of Cienfuegos on the Constancia Railroad. It is a colonia of the Constancia sugar plantation. Population about 100. Buildings are all small and not suited for barracks. There is a store. A battalion could camp here in dry weather, or, by seizing the buildings, could go into cantonment in wet weather. Water supply obtained from a well and pumped by steam into a 3,000-gallon tank. There is also a 10,000 gallon railroad tank one-half mile from Yaguaramas River. No grass, but plenty of cane tops.

Ojo de Agua.—Barrio and village. The village is a much scattered colonia about 16 miles northeast of Cienfuegos. Population about 800. Water supply is obtained from springs and wells. Animals watered at creek on western edge of village. Place would shelter about two companies.

Punta Gorda.—Barrio and village. The village is on a peninsula extending into Cienfuegos Bay, 2½ miles south of the city of Cienfuegos. Used as a summer resort by the residents of Cienfuegos, although some of the most influential business men make it their permanent residence. Width of peninsula at north end, 100 yards, gradually narrowing to 20 yards in the center and widening to 25 yards at south end. Sea wall of cement on east side; piles on west side. Population in winter months about 100; during the summer the number reaches about 400. About 50 houses. Water supply obtained from open wells and rain-water tanks. No sewer system. A few of the larger houses have acetylene gas. There are at least 10 houses that could be used for barracks; situated at various places in the village. They would accommodate 200 men. Only 3 houses, situated at south end of village, have stables; capacity, 12 animals. Telephone line to Cienfuegos. There is one blockhouse; cement walls, 12 inches thick, circular in shape, 15 loopholes; situated at north end of village; in poor repair. Road to Cienfuegos leaves north end of village. Village can be approached by land from the north only.

Ramírez.—Barrio and village. The village is on the Cuban Central Railroad, about 6 miles north of Cienfuegos. It is scattered over a considerable extent of territory, not more than 3 or 4 houses being in any one group. Population about 250. There is a steam rock-crushing plant at the railroad. Farming and grazing lands in the vicinity. Water obtained from wells and, during rainy season, from small streams.

Real Campiña.—Barrio and village. Besides the village bearing its name the barrio contains the village of Pueblo Nuevo and central Perseverancia. The village is on the U. H. R. R., about 6 miles southeast of Aguada de Pasajeros and 26 miles northwest of Cienfuegos. Population about 600. Consists of 15 stores and 150 houses. There are 2 wooden blockhouses protecting railroad. At the railroad station are a watering trough and a ramp for unloading stock. Several wells in the village give good water. The village would hold about 600 men if quarters were seized.

Pueblo Nuevo.—Village. About 1 mile northwest of Real Campiña on the U. H. R. R. and 27 miles northwest of Cienfuegos. A small village of about 30 houses. Has 2 stores, post-office, and telegraph station. Water obtained from wells.

Sierra.—Barrio and village. The settlement bearing the name is a small village about 500 feet above sea level, situated about 26 miles southeast of Cienfuegos, at the foot of Pico Blanco Hill. It has 4 stores, 14 wooden houses with tile roofs, and about 75 people. Water is obtained from Rio Gavilán. Several roads meet here: One to the northeast to Cumanayagua; another due east to San Blas and thence over the mountains to Buenos Aires and Naranjo; another southwest to Gavilan, where it meets the main highway to Trinidad; and another to Negritas de Gavilan, meeting the highway to Cienfuegos.

Soto.—Barrio and sitio. The sitio is 6 miles east of Cienfuegos, on the main road from Cienfuegos to Cumanayagua, and very close to Lagunillas, which was also formerly known as Soto. It consists of 5 wooden houses, and has a population of 20. Water is obtained from wells.

Venero.—Barrio and village. The village is known as Venero San Juan or Esles and is near the terminus of the Matanzas division U. H. R. R., about 30 miles northwest of Cienfuegos. It consists of 4 stores and 10 houses. Water is obtained from wells.

Yaguaramas.—Barrio and village. The village is 20 miles northwest of Cienfuegos, on the east side of the Yaguaramas River, and at the junction of the U. H. R. R. with the Constancia Railroad (the latter narrow gauge). Houses are set on certain lines, but there are no regular streets. Population about 1,000, one-third of whom are negroes.

Water supply from wells, and could also be obtained from the Yaguaramas River. There are two windmills, with 5,000 gallons tank capacity. Water should be boiled. Quantity ample at all times for a battalion of infantry or a squadron of cavalry and ordinarily would be sufficient for larger forces of infantry. There is no sewer system or lighting plant.

Good camp sites for troops north and south of village. An army corps could camp in this vicinity but for lack of watering facilities.

There is an old Spanish trench south of the village covering the railroad and the road to Horquita and one to the northeast of village covering the railroad and road to Álava. These trenches are 2½ feet wide, 3 feet deep, and have a parapet of 1 foot. They are overgrown with grass and weeds and are invisible from a distance of 100 feet, but are still in serviceable condition and would afford shelter for 500 to 1,000 men.

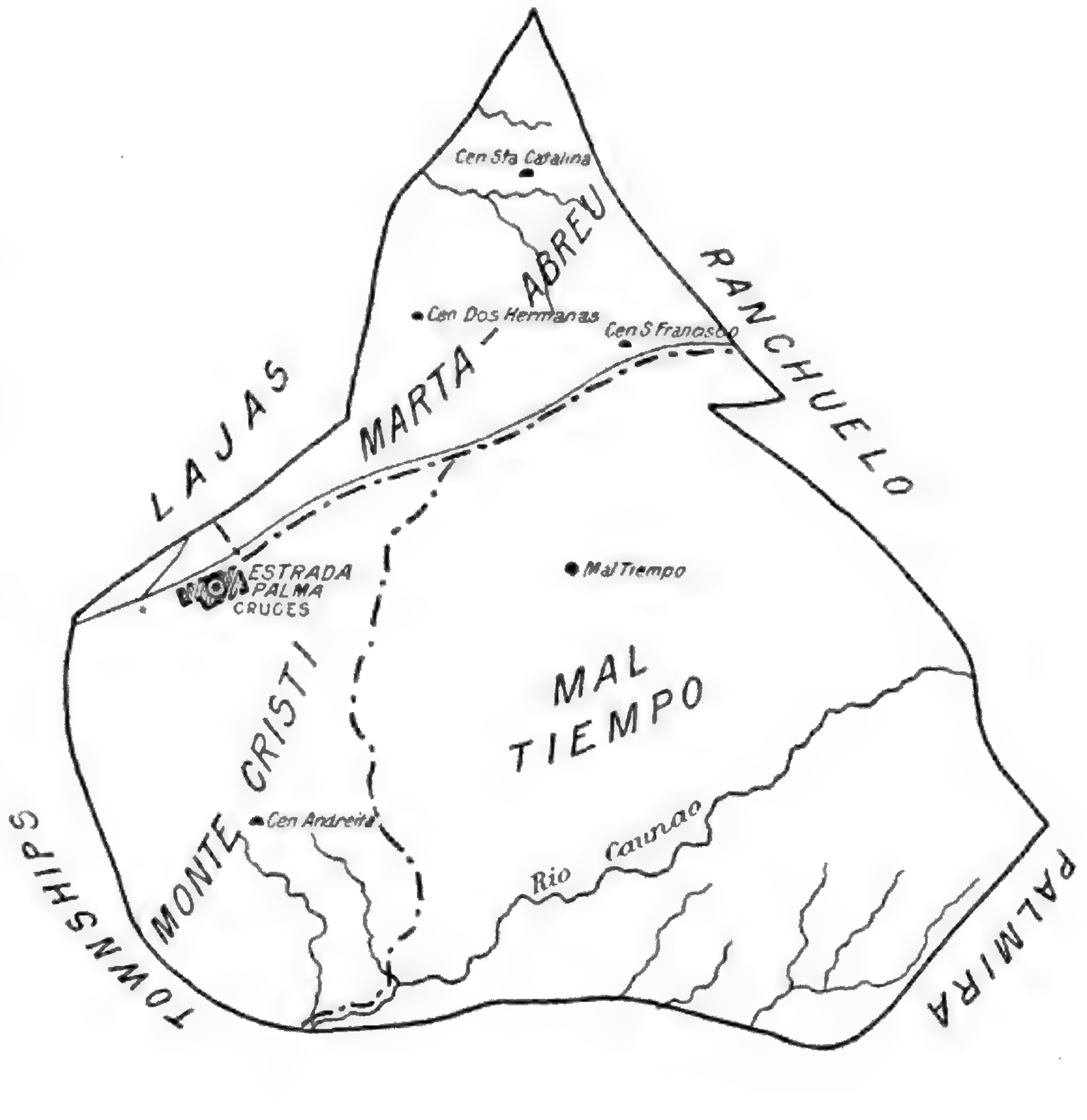
Telegraph, single wire, along U. H. R. R., connects with all parts of the island. Telephone, single wire, along line of Constancia Railroad.

No buildings suitable for quarters for troops. Buildings are all very small and mostly of wood, with tile or thatched roofs. From 1895 to 1898 the Spaniards had a garrison of 500 men sheltered in temporary barracks, which have since been destroyed. Best line of approach for attack, from southeast and southwest.

TOWNSHIP OF CRUCES (CAPITAL, CRUCES).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Cruces	Estrada Palma	Urban		4,347
Mal Tiempo	Mal Tiempo	Rural	3	2,879
	Marta Abreu	do	2.6	1,242
	Monte Cristi	do	.75	1,771

CRUCES TOWNSHIP



Cruces.—Town. Situated about 20 miles northeast of Cienfuegos and 10 miles southwest of Ranchuelo. It covers the entire barrio of Estrada Palma, making it an urban barrio. Streets are level and unpaved. Principal industries are sugar and cattle.

Population, 5,111.

No water system; water obtained from wells at each house; quality good.

No modern sewer system. No electric lights. A few gas lamps in plaza.

No barracks. In emergency 25 men could be accommodated in police station, corner calles Las Casas and General Esquerra. Two schoolhouses near plaza would hold one troop each. One building [now hotel], stone, near railroad, would hold one troop. One large warehouse at the railroad depot would accommodate 200 men.

No corrals. Suitable ground between calles Esquerra, General Sánchez, and Real de Cuba, and Cuban Central and Caracas Railroads. Also suitable ground between Cuban Central Railroad and calle Gómez. Could obtain water from railroad tank at station.

No hospitals. One screened room at police station for fever suspects. One large house, corner calles Gómez and José Robau, could be used; capacity, 30 beds. Building (printing office) on calle Gómez; capacity, 25 beds. One schoolhouse, corner of calles Agramonte and Mal Tiempo, would hold about 20 beds. All buildings stone and brick, with tile roofs and in good repair.

Storehouses: Freight house at railroad depot about 20 by 40 feet; small platform. Several sidings of Cuban Central Railroad at depot. Several large houses and schoolhouse (formerly Spanish barracks) on calles Ambrosas and Cruces, near crossing of Caracas Railroad.

Railroad depot on calle Gómez between calle Las Casas and calle General Sánchez. Post-office on calle Gómez between calle Pepe Alemán and calle Calixto García. Telephone and telegraph offices on calle Gómez, between Sanchez and Las Casas; also line owned by Cuban Central Railroad at railroad office.

Large camp sites near town on north, east, and west sides; plenty of grass, but no wood or water.

No defenses about town.

Cuban Central Railroad enters town. About three cars could be unloaded at one time at station platform.

Roads: Northeast to Santa Clara, Ranchuelo, and Nuevas; east to Bernia and Guajo; south to Mal Tiempo, Potrerillo, and Ciego Montero; southwest and west to Palmira and Cienfuegos.

North and west sides of town are the best sides to attack.

Mal Tiempo.—Barrio and sitio. The sitio is at a crossroads, 3 miles southeast of Cruces. It consists of a store, a schoolhouse, several small huts, and the remains of an old Spanish blockhouse. Water obtained from wells. No accommodations for troops. A road leads south to Guaos and one northwest to Cruces.

Marta Abreu.—Barrio. A large section of country having no settlement or point bearing the name. Contains centrals Dos Hermanas, San Francisco, and Santa Catalina.

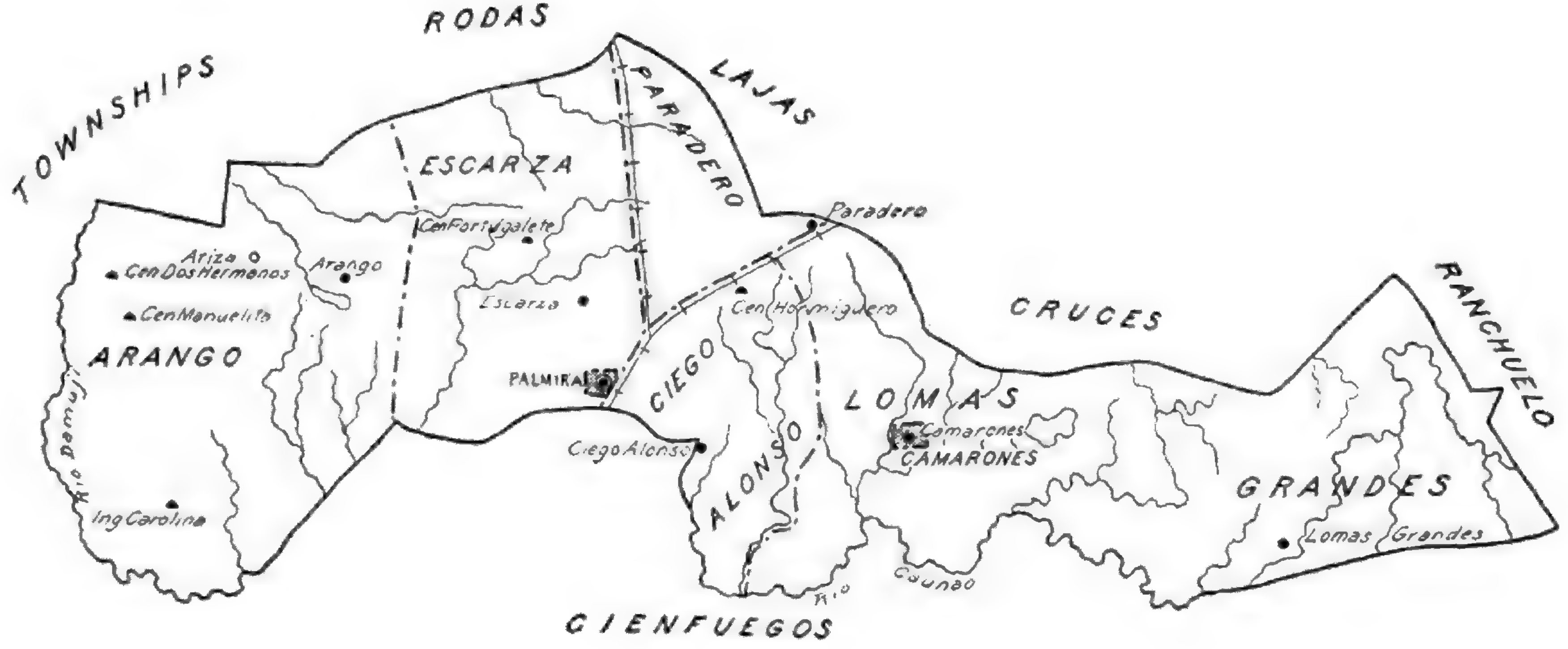
Monte Cristi.—Barrio. A rural district which surrounds the urban barrio of Estrada Palma and town of Cruces. Contains central Andreita.

TOWNSHIP OF PALMIRA (CAPITAL, PALMIRA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Palmira	Primero	Urban		1,997
	Segundo	do		2,140
Arango	Arango	Rural	5	2,052
Ariza.				
Camarones	Camarones	Urban	7½	1,127
Ciego Alonso	Ciego Alonso	Rural	1¾	1,305
Escarza	Escarza	do	1¼	2,375
Lomas Grandes	Lomas Grandes	do	12½	1,903
Paradero	Paradero	do	6	2,851

Palmira.—Town. The town is about 10 miles north of Cienfuegos, and is divided into 3 urban wards, or barrios. Supported by the trade of surrounding people engaged in cultivation of sugar. It is the shipping point for large quantities of cane. Population, 4,137.

PALMIRA TOWNSHIP



Water is of excellent quality. Supply comes from wells situated all over the town.

No sewer system; no method of lighting. Sanitary condition poor.

Barracks or suitable buildings: Ayuntamiento; capacity about 100 men; good repair; sanitation fair; situated on Plaza; water from good well in patio. Cuban Club building; capacity about 100; good repair; sanitation fair; on Plaza; good well in patio. Spanish Club building; capacity, about 100; good repair; sanitation fair; situated on Plaza; good well in patio. Large house; capacity, 75; good repair; on corner San Antonio and San Francisco streets; poor well; water must be hauled. Numerous private houses could be used in an emergency.

No buildings especially desirable for use as hospitals are available.

No stables. There are no transportation corrals. Open area near railroad station available for stock, and water could be obtained at railroad water tank.

Telegraph office, post-office, city headquarters, jail, etc., are in Ayuntamiento building, on the plaza. Telephone central is on a side street near the plaza.

There is a tract of land on east side of town suitable for camp site for one battalion. However, adjoining country could be utilized for this purpose for an unlimited number of troops. Water would have to be obtained in Palmira and at several large farm houses about one-quarter of a mile distant. Drainage is good; soil, gravel; no fuel available in immediate vicinity; plenty of grazing; location overlooks town and, from military standpoint, controls same.

No defenses.

Town is on Cuban Central Railroad. The station is centrally situated. Sidetracks are along main line. No facilities for entraining or detraining except on depot platform. A spur runs out to Portugalete sugar plantation, 2 miles away. This spur is both standard and narrow gauge. Private system at plantation is narrow gauge.

Poor dirt roads lead from Palmira to Cienfuegos, Cruces, Ciego Alonso, and Limones.

Best line of approach for attack would be over the hills on east side of town. These hills control the town. Ground is comparatively level in other directions.

Arango.—Barrio and sitio. Besides the sitio bearing its name, the barrio contains the village of Ariza, the ingenio Carolina, and centrals Dos Hermanos and Manuelita. The sitio is about 5 miles from Palmira and consists of a store and 2 houses. Water supply obtained from wells and cisterns. Good camp site about one-fourth mile northeast of store. Nearest railroad is Cuban Central at Palmira. Road to Palmira is poor; impassable in rainy season.

Ariza.—Village. About 6½ miles north of west of Palmira; 500 to 600 inhabitants. Contains 6 or 7 stores and about 50 houses, mostly huts. A branch of the Manuelita sugar estate railroad passes through village. Water is obtained from wells.

Camarones.—Barrio and town. Town is 7½ miles east of Palmira. Population, 1,127. Houses all small; 107 have tile roofs and 11 thatched roofs. Thirteen small general merchandise stores, 1 drug store, and 2 restaurants.

Buildings suitable for barracks: School building along side of church at east edge of town; capacity, 65 men. Presidencia; capacity, 20 men.

Water supply is obtained from wells and creek at west edge of town. The Caunao River flows south about one-third of a mile to the east of the town. A small creek flows south along the west edge of the town. Apparently the inhabitants carry their own water. Plenty of water in streams for men and horses of a command of 200 men. Fair places for watering horses at southeast edge of town. All water for drinking purposes should be boiled.

Branch of the Hormiguero Plantation Railroad (narrow gauge) passes through the town en route to Manaquítas.

A single-wire telephone line follows the railroad to this place. There is a phone at the Presidencia used by the rural guard.

Ciego Alonso.—Barrio and sitio. Central Hormiguero is within the barrio. The sitio is about 1½ miles east of Palmira. Population, about 10. There are 3 houses and a small general merchandise store. Water supply obtained from wells; sufficient for the needs of the people; should be boiled. No telephone. A line formerly passed through this place en route to Camarones from Palmira, but it has been abandoned.

Trails lead out of the sitio as follows: One north to Hormiguero; one east to Camarones; one south to Caunao and Cienfuegos; and one west to Palmira.

Escarza.—Barrio and sitio. Sitio is about 1½ miles northwest of Palmira, and is a point consisting of a store and a house; both property of the Portugalete sugar plantation, which is situated in the barrio. Population about 20. Water supply obtained from small stream and cisterns. No good camp sites in immediate vicinity, as the ground is very low and swampy. Nearest railroad is the narrow gauge of the Portugalete plantation and nearest standard gauge railroad is the Cuban Central at Palmira.

There is a poor road to Portugalete sugar mill, which is impassable in rainy season, and one to Palmira, passable by horses.

Lomas Grandes.—Barrio and sitio. The point bearing the name consists of a small store with residence attached, about 4 miles southwest of Potrerillo, on a hill overlooking valley to Cumanayagua, and 12½ miles by road east of Palmira. Water obtained from spring south of store. Surrounded by pasture land; very rough country.

Paradero.—Barrio and village. Small place of about 30 houses on the Cuban Central Railroad, a trifle over half way between Palmira and Cruces (6 miles from Palmira). It is the railroad station for Camarones proper. It is also called Camarone and Paradero de Camarones.

Kilometer post No. 84 is one-quarter of a mile northeast of Paradero or Camarone. There is a siding 110 yards long and stock chutes. Telegraph line of three wires to Cienfuegos, Santa Clara, etc. Water supply is obtained from wells and is apparently plentiful. Water good, but should be boiled. Quarters occupied by rural guard will shelter 30 men.

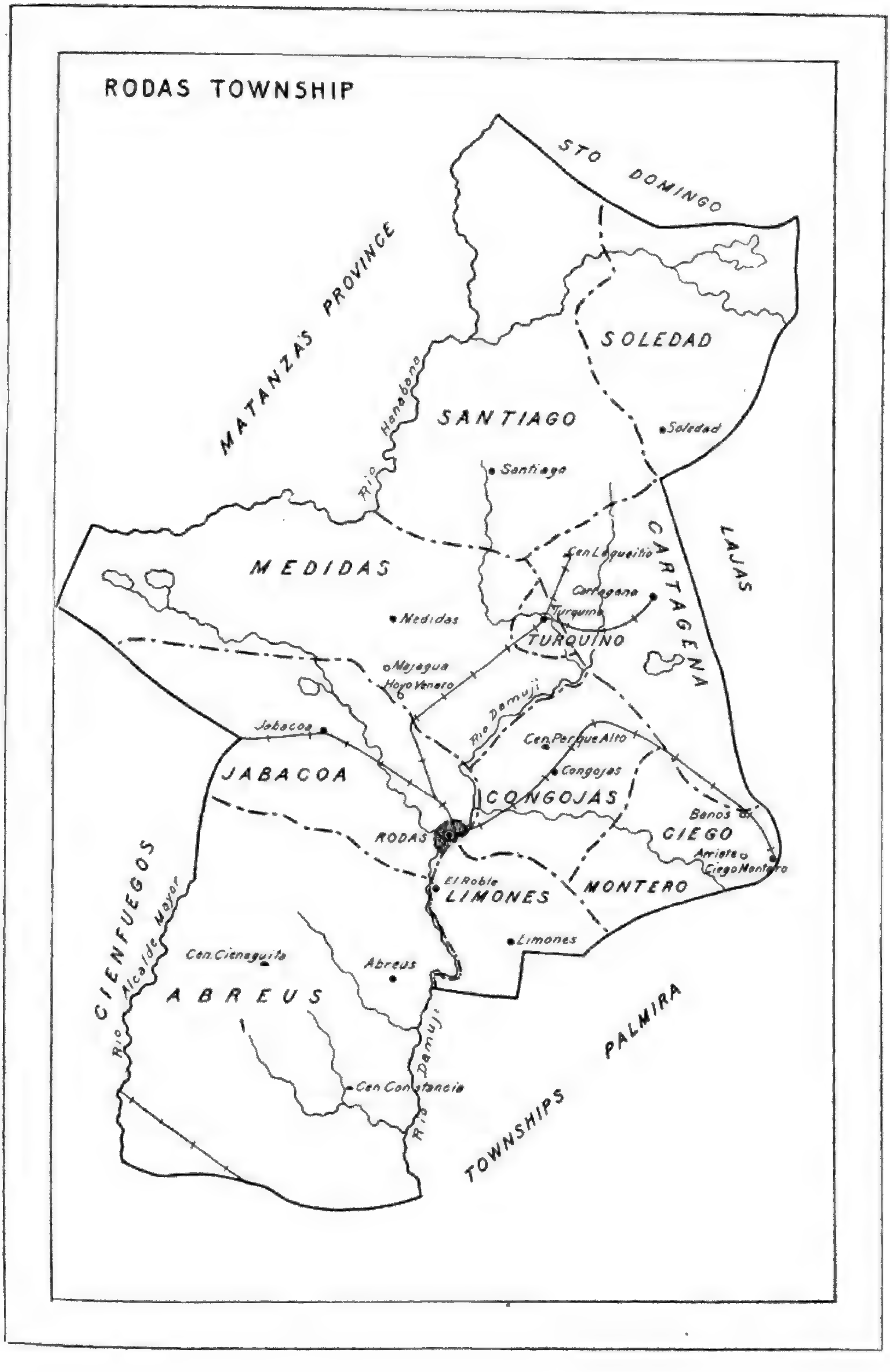
TOWNSHIP OF RODAS (CAPITAL, RODAS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Rodas	Rodas	Urban		3,306
Abreus	Abreus	Rural	4.5	4,418
Cartagena	Cartagena	do	10.5	2,623
Ciego Montero	Ciego Montero	do	10.5	1,464
Arriete.				
Baños.				
Congojas	Congojas	do	3.5	2,256
Jabacoa	Jabacoa	do	3.5	503
Limones	Limones	do	5	2,103
El Roble.				
Medidas	Medidas	do	7.5	1,856
Hoyo Venero.				
Majagua.				
Santiago	Santiago	do	15	953
Soledad	Soledad	do	18	2,300
Turquino	Turquino	do	9	301

Rodas.—Barrio and town. The town is 15 miles northwest of Cienfuegos, on the Damují River (head of navigation), and 38 miles west of Santa Clara. Furnishes supplies to near-by sugar estates. Population, 3,306.

Water supply pumped from Jabacoa River into reservoir and distributed by pipes; pumping station and reservoir on west side of town; quality of water good. Electricity used for lighting; plant situated in northwest part of town.

There are buildings suitable for barracks near boat landing, and the ayuntamiento and church could be used; sanitary condition fair; capacity, 500 men. Water supply good and is distributed by pipe. Corral could be established on east side of town near river. Ayuntamiento is most suitable building for hospital. Railroad buildings at Cuban Central station would be suitable for storehouses. Telegraph office at railroad station of Cuban Central Railroad. Post-office is in southeast section of town. Ice machine on west side of town on bank of Jabacoa River. A regiment could be camped around town; plenty of water and healthful locality. No defenses. Two railroads: (1) Cuban Central Railroad, through northern portion of town, standard gauge; water tank, and siding 150 yards long. (2) Rodas Railroad, narrow gauge, with sidings. Roads leave town northeast to San Lino and Jabacoa; east to ingenios Parque Alto and Aviso; southeast to Cienfuegos; southwest to Abreus. Best line of approach for attack is from the north.


RODAS TOWNSHIP
STO DOMINGO
MATANZAS PROVINCE
SOLEDAD
Soledad
SANTIAGO
Santiago
Rio Hanabana
LAJAS
CARTAGENA
Cen Laqueitio
Cartagena
Turquino
TURQUINO
MEDIDAS
Medidas
Majagua
Hoyo Venero
Rio Damuji
Cen Perque Alto
Congojas
Jabacoa
JABACOA
CONGOJAS
Banos de
CIEGO
Arriete
Ciego Montero
RODAS
El Roble
LIMONES
MONTERO
Limones
CIENFUEGOS
Rio Alcalde Mayor
Cen Cieneguita
Abreus
ABREUS
Rio Damuji
Cen Constancia
PALMIRA
TOWNSHIPS

Abreus.—Barrio and town. Barrio contains centrals Constancia and Cieneguita. Town is one-half mile west of the Damují River, 4½ miles south of Rodas, and about 7 miles north of Cienfuegos Bay. The town has no industries, but is the commercial center of outlying sugar plantations and country districts. The population is 2,095. Water supply is obtained from a small tributary of the Damují River, situated north of the town. The pumping station is in the northwest part of town. The water is pumped into two tanks, each with a capacity of 5,000 gallons, and is piped to the various houses. It is of good quality. No sewer system and no public lighting plant. All the buildings are small and none would accommodate a large force. By seizing a number of buildings a regiment could be temporarily sheltered. There are 398 houses in the town, 40 of which are stores of various kinds. There are 38 houses built of stone, and the remainder are of wood or thatched palm. There are no stables, no transportation corrals, no hospitals, and no buildings suitable for quartermaster and commissary storehouses for a large command. No railroad station. Post, telegraph, and telephone offices in the same building in the west part of the town. No defenses. Good camp site on slope south of the town, suitable for a regiment. Water used would be obtained from town waterworks. Water for animals to be obtained from arroyo, one-half mile distant, on the north edge of the town. Wood obtained from a woods southeast of town. Abreus is not on a railroad line. There is a 30-inch gauge track from the town to the Damují River. A flat car drawn by a mule carries freight to and from the river. The Damují River is crossed at this point by a trail ferry, which can carry one escort wagon or 12 animals. Roads lead out of town to Rodas, Yaguaramas, Constancia, and Cienfuegos. The best line of approach for attack is from the north or west.

Cartagena.—Barrio and town. A town of 1,100 inhabitants, situated 10½ miles by road northeast of Rodas and on the narrow-gauge Rodas R. R. The houses are principally small one-story frame buildings. One building, at the south end of town, is suitable for a barracks. It would hold about 75 men. Water supply obtained from a well; water not believed to be good. Many of the inhabitants get their water from the Damují River, which runs about a quarter of a mile north of the town, but there are wells near most of the houses. Telegraphic communication along the railroad. Live stock of all kinds very plentiful in the vicinity, the surrounding country being excellent grazing ground. Central Lequeitio is in this barrio.

Ciego Montero.—Barrio and village. The barrio includes the villages of Arriete and Baños, besides the village bearing its name. The village is about 8 miles west of Cruces, 13 miles north of Cienfuegos, and 10½ miles east of Rodas. Population about 150. Water supply obtained from Río Magara, on north side of village, and wells; good and abundant. Village consists of 20 thatched and 19 tile roof houses. No large buildings. Wire fences and hedges outside of village. Plenty of water and good camp sites.

Arriete.—Village. The village is a railroad station on the Cuban Central Railroad, one-half mile west of Ciego Montero and 10 miles southeast of Rodas. Has a post-office, telegraph station, store, and a few thatched roof houses. Caracas Railroad crosses the Cuban Central at this point. Water supply obtained from wells, and stream one-half mile north of village.

Baños.—Village. The village is in the vicinity of sulphur baths, and is situated on the Cuban Central Railroad, 1½ miles northwest of Ciego Montero and 9 miles east of Rodas. A good deal of sugar cane is raised in vicinity. Place consists of about 6 frame houses and a large tile-roof bath house in a dilapidated condition. Would quarter one troop. Water supply obtained from wells and from the river. No facilities for loading or unloading at railroad station.

Congojas.—Barrio and village. The village is on the Cuban Central Railroad about 3½ miles east of Rodas. It is a small country village with no particular industries. Population about 500. Water supply obtained from wells and a small stream running past the village; quality not good. No buildings suitable for troops. Railroad station is small and is just north of village. Telegraph office in station. Post-office and telephone in center of village. A siding from the railroad runs into Parque Alto, a sugar estate one-half mile distant. Best approach for attack is from the north.

Jabacao.—Barrio and sitio. The sitio, which is 3½ miles northwest of Rodas, has 3 very small one-story frame buildings and about 8 palm huts. Water supply is obtained from wells and is limited. No good camp site in immediate vicinity.

Limones.—Barrio and village. The village is 5 miles southeast of Rodas. It contains about 40 houses, 15 of which are of wood and the balance native huts; 2 stores. Population about 400. Water supply obtained from 10 wells; quality good and quantity plentiful.

El Roble.—Village. Situated 4 miles southeast of Rodas. Consists of 20 palm houses scattered along road running from central Dos Hermanas to Río Limones. Damují and Limones rivers flow near by.

Medidas.—Barrio and sitio. The barrio includes sitios Hoyo Venero, Majagua, and central San Lino. The sitio is about 7½ miles northwest of Rodas and contains about 6 houses. Water obtained from a well.

Hoyo Venero.—Sitio. Situated 5 miles north of Rodas. Consists of a general store and 3 or 4 houses. Water from a well.

Majagua.—Sitio. Situated 6 miles north of Rodas. Consists of but a few huts.

Santiago.—Barrio and village. The village is 15 miles by road northeast of Rodas. It contains about 15 houses, a church, and 2 small stores, all situated on one street. Houses are of wood with thatched roofs. Church is of stone with tile roof. Has telephone connection with Soledad. Water supply obtained from surface wells and is of good quality. Surrounding country slightly rolling. Trails fair for ox carts and light wagons.

Soledad.—Barrio and village. The barrio is situated in the extreme northeastern part of the municipality; has extensive fertile lands. Contains a large number of colonias and the central Estrella, which was destroyed during the 1895–1898 war. The railroad of San Lino goes to the center of the barrio. The village of Soledad is 18 miles northeast of Rodas. It was destroyed during the 1895–1898 war, and is only a small place, but is rapidly increasing, owing to the construction of a bridge over the Damují River, which facilitates transportation of produce. The houses are some 40 in number and scattered along on an east-and-west road for more than a mile. The population is several hundred. A spur of the San Agustín-Lequeitio Railroad comes into the village, and there is telephonic communication with the colonias of the centrals Lequeitio and San Agustín.

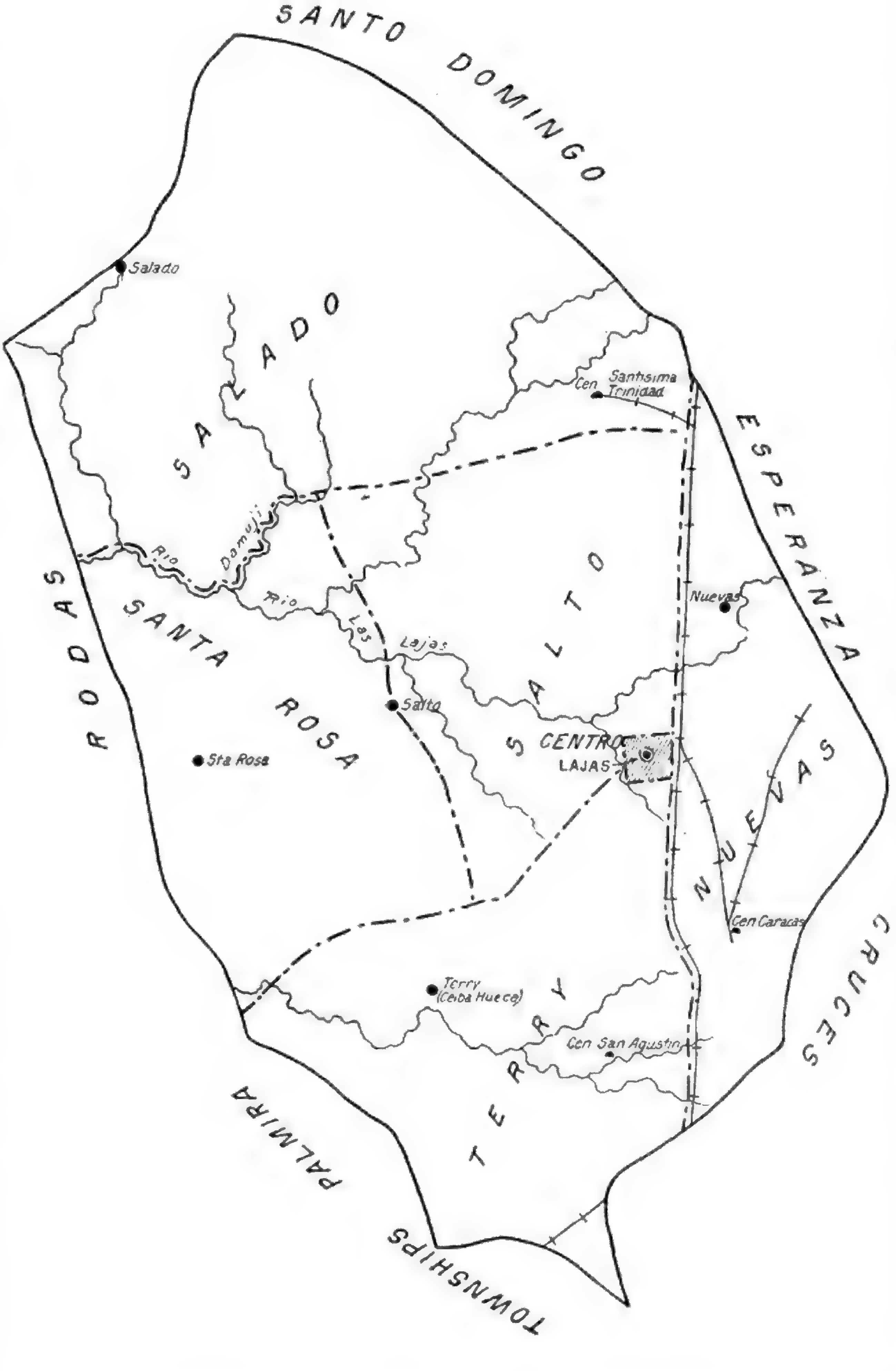
Turquino.—Barrio and village. The village is situated 9 miles by road northeast of Rodas, on the main line of a narrow-gauge road known as the Rodas R. R. Population about 150. There are no buildings suitable for quarters. Water supply is obtained from wells and a small stream east of the village. Cattle, horses, and oxen are plentiful in the vicinity, the surrounding country being excellent for grazing. There is a very good camp site on high ground just northeast of the village.

TOWNSHIP OF SANTA ISABELA DE LAS LAJAS (CAPITAL, LAJAS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Lajas	Centro	Urban		4,509
Nuevas	Nuevas	Rural	3	1,177
	Salado	do	5.5	1,325
Salto	Salto	do	5	1,516
Santa Rosa	Santa Rosa	do	7	938
Terry	Terry	do	4.5	1,942

Lajas.—Town. A town of 4,509 inhabitants. Situated in Centro barrio, 22 miles northeast of Cienfuegos and 21 miles west of Santa Clara. Water supply is obtained from the Lajas and Lima rivers, cisterns and wells. Rain water good. Well water dangerous, as it is polluted by drainage. The rivers mentioned flow close to the town. There are no large buildings in town. About 200 have thatched roofs, and 300 have tile roofs. There are about 300 houses of solid construction. The church is on the plaza in the north end of town. Accommodations for troops are fair. There are no barracks. Schoolhouses, buildings used as stores, and ayuntamiento would accommodate about 500 men. There is telegraphic communication west to Havana and south to Cienfuegos. Streets are paved. Health conditions are doubtful, but no epidemics occur. The principal industries are cultivation of sugar cane and cattle raising. There is no hospital. No defenses about the town. Many of the

STA. ISABELA DE LAS LAJAS TOWNSHIP



houses are hedged or fenced. There are no large corrals available.

Nuevas.—Barrio and village. The village is about 3 miles northeast of Lajas, on high ground. There are about 40 houses scattered over an area of about 600 acres, and the population is about 200. Water is obtained from wells, and a small stream flows through the village. Central Caracas is situated in the barrio.

Salado.—Barrio. This barrio consists of the estate of the Santísima Trinidad sugar plantation.

Salto.—Barrio and village. An unimportant village situated about 5 miles west of Lajas, in rolling country and on the banks of the Río Lajas. The population is 150 and the village contains about 75 houses, none of which are especially suitable for barracks, hospital, or storehouses. Water is obtained from wells and is of good quality but of limited quantity. The Río Lajas, however, is about 200 yards north of the village and always contains plenty of water. Small rural guard stable of 8 stalls at the north end of village. No corrals, but there is suitable ground all around the village. Good watering place for animals at Río Lajas. Camp could be established on the banks of Río Lajas. There is plenty of wood, water and grass. Telephone office in center of village. A narrow-gauge railroad running from Lequeitio to San Agustín passes through village. No siding or facilities for loading or unloading. Roads run northeast to Cartagena, southeast to Lajas, southwest to San Agustín sugar mill, and northwest to Santa Rosa. Best line of approach for attack is from the north.

Santa Rosa.—Barrio and village. The village is 7 miles southwest of Lajas, in open rolling country and stretched out about half a mile along the road. The principal industry is raising sugar cane. The population is about 100, and the place contains about 30 houses. There is a store and a schoolhouse. Water supply is obtained from open wells and is poor. Near by is the Río Laguna de Mora. There is a good camp site at Laguna de Mora, with plenty of wood, grass, and water. Good watering place for animals at Laguna de Mora. A road runs west to Ciego Montero and one east to Salto.

Terry (*Ceiba Hueca*).—Barrio and village. The village is in flat open country, 5 miles due west of central Caracas and

4½ miles southwest of Lajas. Population, about 25. One large well in the village. There are 10 small houses, only 2 of which are frame. The Central Caracas Railroad passes through and branches at this point. Half a mile to the east the San Agustín-Lequeitio Railroad crosses the Caracas Railroad. Roads run out of village northeast to Lajas, south to Camarones, and west to Ciego Montero. Barrio contains central San Agustín.

JUDICIAL DISTRICT OF SAGUA LA GRANDE.

Township:	Population.
Quemado de Güines	11,309
Rancho Veloz	14,616
Sagua la Grande	26,937
Santo Domingo	20,776

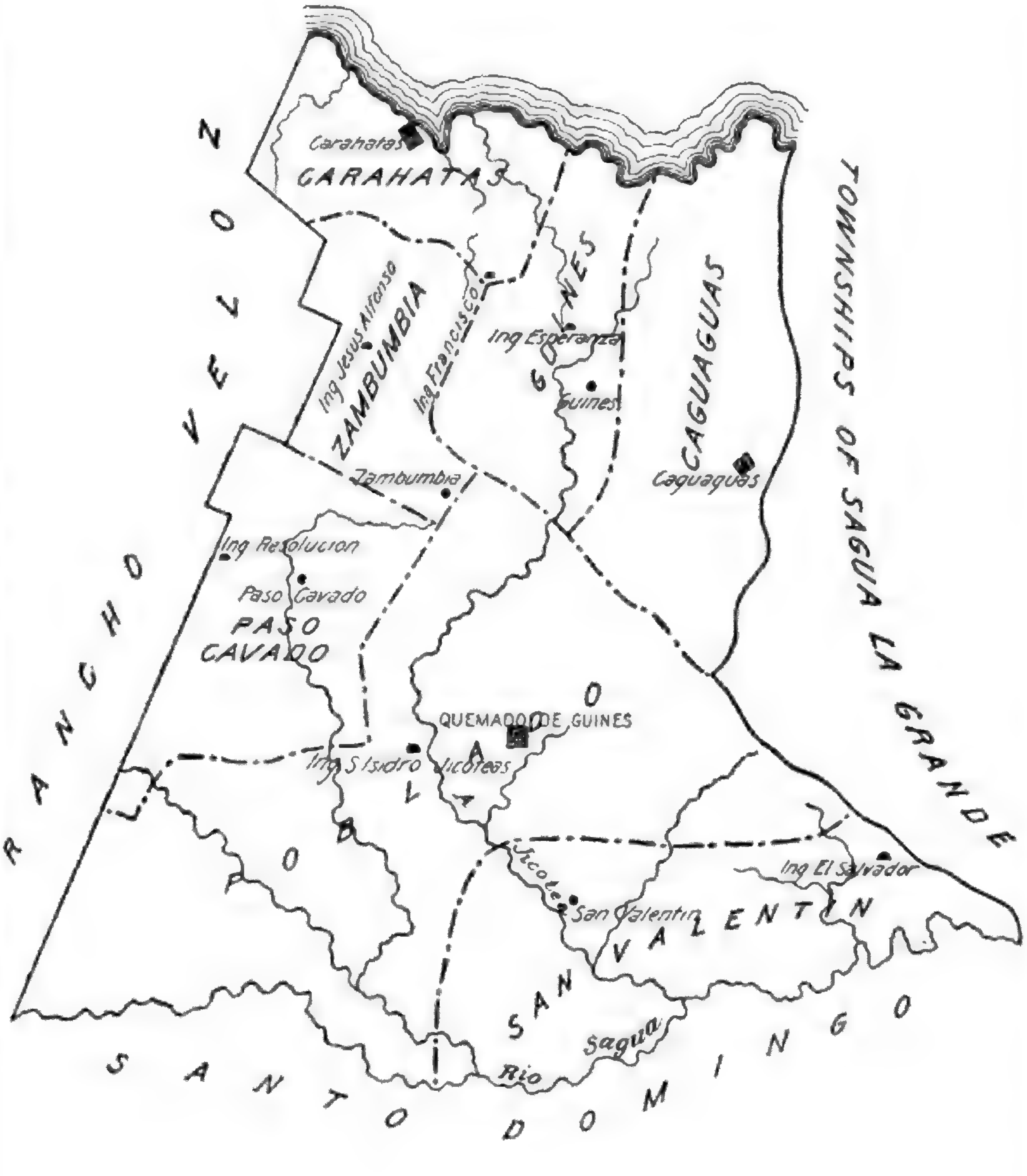
TOWNSHIP OF QUEMADO DE GÜINES (CAPITAL, QUEMADO DE GÜINES).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Quemado de Güines	Poblado	Urban and rural.		4,453
Caguaguas	Caguaguas	do	5	1,039
Carahatas	Carahatas	do	10	1,311
Güines	Güines	Rural	4½	1,132
Paso Cavado	Paso Cavado	do	4½	1,667
San Valentín (Empero)	San Valentín	do	4	600
Zambumbia	Zambumbia	do	4	1,107

Quemado de Güines.—Town. Situated in Poblado barrio and 34 miles northwest of Santa Clara. Population, 1,867. Water supply is obtained from wells and is apparently of good quality. Buildings are constructed mostly of wood, and the following are the most suitable for quartering troops; Catholic Church, Plaza and Padoma street, 160 men; house about 50 feet from church, 80 men. There are also several small houses used as schools, which would accommodate 15 to 25 men. Post-office and telegraph office in same building on North Sans street. Ingenio San Isidro is within the barrio.

Caguaguas.—Barrio and village. The village is situated about 9 miles west and north of Sagua la Grande on the Caguaguas narrow-gauge railroad and 5 miles northeast of Quemado de Güines. Population, about 45. Water ob-

QUEMADO DE GUINES
TOWNSHIP



tained from wells and cisterns. There is telegraphic communication with Quemado de Güines and Sagua la Grande, and telephonic communication with Sagua la Grande. There are good camp sites in the vicinity. Roads lead south and east to Sagua la Grande and Chinchilla; south to Quemado de Güines; north and west to Güines and ingenio Esperanza.

Carahatas.—Barrio and village. The barrio contains the ingenio San Francisco de Asis. The village is situated on the coast about 3 miles north of this sugar mill and about 6 miles northwest of Caguaguas. Population, about 300. Water supply obtained from wells; quality fair and quantity sufficient for drinking purposes. Most of the buildings are of frame construction; the balance are thatched huts.

There are 3 good wharves, running out some 200 feet to 7 feet of water at low tide.

Two of the wharves have both standard and narrow-gauge tracks and the other has narrow-gauge tracks. The standard-gauge track runs to ingenio San Francisco and the narrow-gauge track (30 inches) runs to ingenio Esperanza.

There are 3 large warehouses, each about 60 by 180 feet; tile roofs; in good condition. These buildings would shelter about 1,000 men. Exportation of sugar is the principal industry. Telephone connection with Quemado de Güines. Surrounding country low and unsuitable for camps.

Güines.—Barrio and sitio. The sitio is about 4 miles north of Quemado de Güines and consists of a store and 3 frame houses. Water of fair quality obtained from a well. In the barrio is situated the ingenio Esperanza (de Francia).

Paso Cavado.—Barrio and sitio. Barrio contains ingenio Resolución. The sitio is 4½ miles northwest of Quemado de Güines and consists of 3 frame houses, with tile roofs, and a store. Water obtained from wells and stream.

San Valentín.—Barrio and village. The ingenio El Salvador is in the barrio. The village is also known as Empero, and is a colonia situated 4 miles southeast of Quemado de Güines on a branch of the ingenio El Salvador narrow-gauge railroad. The place consists of a store and about 10 huts in the vicinity. Water obtained from a small stream. A windmill pumps water to a railroad tank.

Zambumbia.—Barrio and sitio. The sitio is 4 miles northwest of Quemado de Güines and consists of a frame schoolhouse and a store. Water obtained from a well. The barrio contains the ingenio Jesús Alfonso.

TOWNSHIP OF RANCHO VELOZ (CAPITAL, RANCHO VELOZ.)

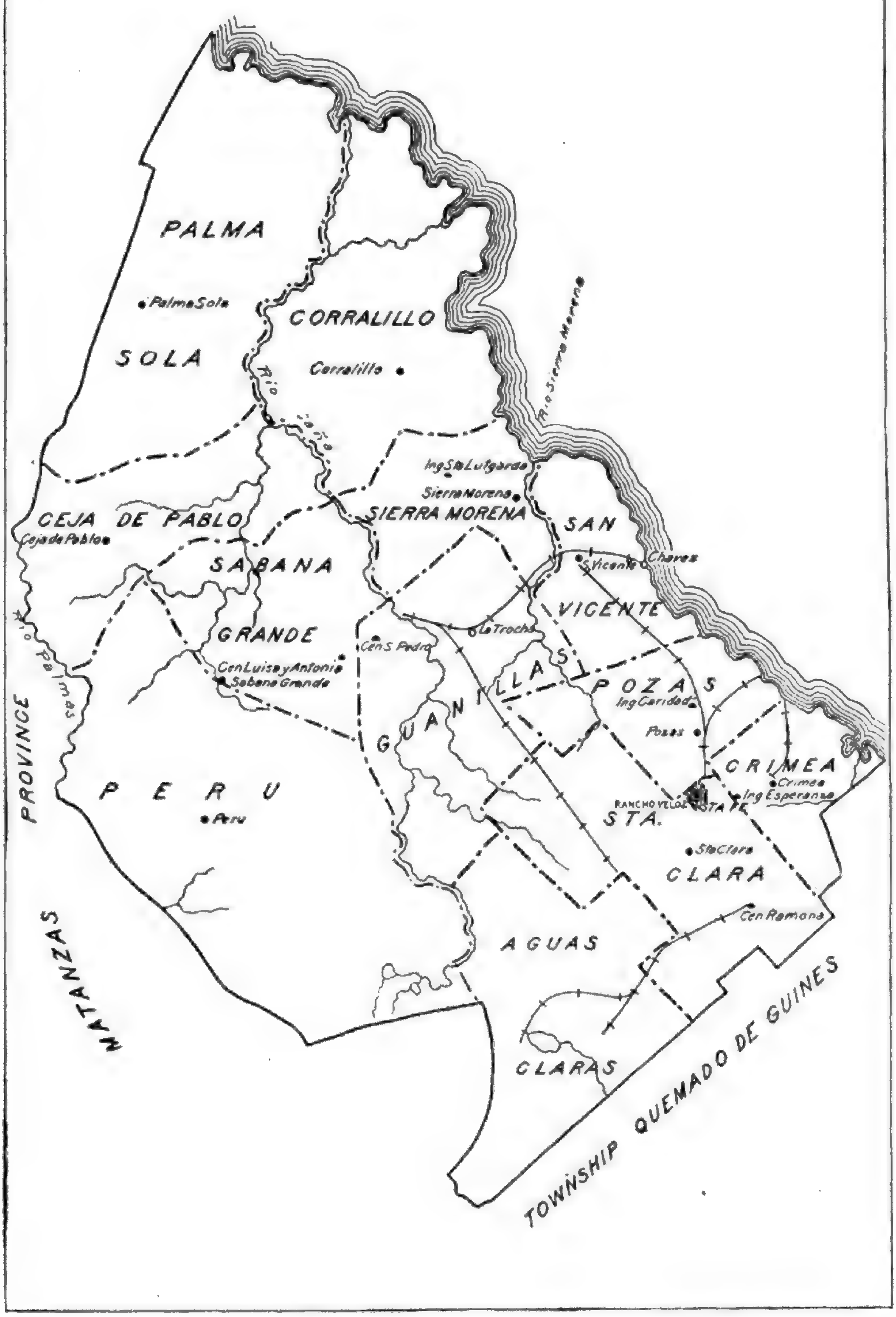
Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Rancho Veloz	Santa Fé	Urban		1,317
	Aguas Claras	Rural	5½	500
Ceja de Pablo	Ceja de Pablo	...do	16⅓	441
Corralillo Baños de Salina.	Corralillo	...do	15	2,117
Crimea	Crimea	...do	2	736
La Jagua La Trocha.	Guanillas	...do	12	897
Palma Sola	Palma Sola	...do	23	354
Perú	Perú	...do	15½	939
Pozas	Pozas	...do	1½	1,195
Sabana Grande	Sabana Grande	...do	14	941
Santa Clara	Santa Clara	...do	1¼	2,145
San Vicente Chavez.	San Vicente	...do	8⅛	839
Sierra Morena	Sierra Morena	...do	10⅜	2,195

Rancho Veloz.—Town. The town is situated about 8 miles west and north of Carahatas, and nestles at the foot of surrounding hills. It is in itself an urban barrio which is known as Santa Fé. Houses are built mostly of wood, a few being constructed of brick covered with cement. Has a church, town hall, one foundry for repair of narrow-gauge railroad material, one tannery, and a small establishment for the manufacture of yokes and cart wheels. Population, 1,317. Water obtained from wells and cisterns. No buildings suitable for barracks. No stables. No building suitable for hospital and none suitable for quartermaster or commissary storehouse. There are some good camp sites near the town, especially to the northeast. Ground is good and high; drainage excellent; grazing and wood plentiful. Water would have to be secured from town and from farm wells. There is a small creek about 1¼ miles northeast of town.

Defenses: Two old Spanish blockhouses; one on hill to west and south of the town, the other at the eastern edge of the town. These blockhouses are about 15 by 15 by 18 feet and give a good view of the surrounding country in all directions. They are constructed of stone covered with cement, but are not in good repair.

Has telegraph and post-office; telegraph to Sierra Morena, Quemado de Güines, and Sagua la Grande. Carahatas nar-

RANCHO VELOZ TOWNSHIP



row-gauge railroad (private) enters the town, running to Caridad, about 2 miles distant. Has weighing scales and shed. No facilities for unloading supplies. Roads lead out of town as follows: North to Carahatas; north and west to Sierra Morena; south to ingenio Rodríquez, and east to Sabanilla. Best line of approach for attack, from the south and east.

Aguas Claras.—Barrio. The center of the barrio is about 5½ miles southeast of Rancho Veloz. The barrio contains something like 150 small frame and thatched houses scattered throughout it. It also has a schoolhouse and a brickyard. The raising of sugar cane is the principal industry.

Ceja de Pablo.—Barrio and sitio. The point bearing the name is a cattle ranch about 9½ miles southwest of Corralillo and 16 miles from Rancho Veloz. It consists of one frame, thatched-roof house, 6 palm huts, and a schoolhouse; all somewhat scattered. Water obtained from wells; quality good and quantity sufficient.

Corralillo.—Barrio and village. The Baños de Salina are within this barrio. The village of Corralillo is about 7⅛ miles northwest of Sierra Morena and 15 miles by road northwest of Rancho Veloz. People work in surrounding ingenios and cane fields. Population, about 740; mixed. All water obtained from wells and cisterns. No buildings suitable for military purposes; houses mostly frame structures. Telegraph and post-office on main street. Fairly good camp sites surrounding the village. Country undulating; good pasturage; water can be obtained from the village, also from cattle wells and a small creek. Three old dilapidated blockhouses are situated at the edges of the village. Roads lead out of village south and east to ingenio Lutgarda and Sierra Morena, and south to ingenio San Pedro.

Baños de Salina.—Sitio. Situated about 6¼ miles northeast of Corralillo and consists of a frame thatched-roof house and some 10 or 12 small huts. There are also 2 small huts used as bath houses. One of these baths has a temperature of 45°, the water being very salty. The other is very warm, and the water is of a dark-brown color. They are about 20 yards apart. The natives claim they are the best in Cuba for the cure of blood diseases, rheumatism, etc., and that hundreds of people annually visit them. There is also a magnesia well situated a short distance from the baths. They are surrounded by a sandy marsh with a heavy growth of scrub trees and brush. To approach the place it is necessary to dismount at a distance of about 250 yards and proceed on foot over an old discarded railroad track. The place does not present a sanitary appearance as the huts, baths, etc., are in a more or less filthy condition.

Crimea.—Barrio and sitio. Besides the sitio of same name, the barrio contains the ingenio Esperanza (de Reyes). Crimea is about 2 miles northeast of Rancho Veloz. It consists of a schoolhouse and two or three other small buildings of brick or stone. Water obtained from well.

Guanillas.—Barrio. A rural district about 6 miles south and east of Sierra Morena. Principal points in barrio are the central San Pedro, where the alcalde lives, and the sitios La Jagua and La Trocha. There are about 200 shacks scattered throughout the barrio. Water obtained from Río Cañas and from wells; quality good; quantity sufficient. Principal industries are raising of cattle and cane.

La Jagua.—Sitio. Situated 9 miles southwest of Rancho Veloz on the Sierra Morena-Central Louisa road. It consists of several houses scattered along the road.

La Trocha.—Village. About 4¼ miles by road and trail southwest of Sierra Morena and 7 miles north of west of Rancho Veloz. Consists of about 25 houses, 2 of which are brick with tile roofs, and the rest small frame and thatched houses. Has also three square blockhouses, two of which are in fair condition and would accommodate about 15 men. The other blockhouse is two-thirds demolished. There is also a small schoolhouse with accommodations for about 25 pupils, and scattered all over the surrounding country are some 150 shacks. During the war of 1895–1898 there were some 40 Spanish troops at this place, and generally something like 1,500 or 2,000 Spanish troops in the near-by barrios, La Trocha being used as a resting place. It is considered very healthful and the water supply is very good. There are several large tanks for storage of rain water.

Palma Sola.—Barrio and sitio. The sitio is 23 miles northwest of Rancho Veloz. It consists of a few stone ruins; was formerly a small village.

Perú.—Barrio and village. The village is about 15½ miles by road and trail southwest of Rancho Veloz. The place consists of about 25 small frame and thatched houses and a store, while scattered over the barrio proper are about 200 shacks or small houses. The raising of cane, corn, and cattle are the principal industries. Water is obtained from wells and from a small stream. Perú was formerly called Periera.

Pozas.—Barrio and sitio. The settlement bearing the name is about 1½ miles north and west of Rancho Veloz. It consists of a frame shed and 4 or 5 surrounding huts. Raising of sugar cane is the principal industry. There are from 70 to 75 huts scattered over the barrio proper. Well and rain water used. Ingenio Caridad is within the barrio.

Sabana Grande.—Barrio and village. Village is about 14 miles southwest of Rancho Veloz. Consists of about 10 houses and huts. Water obtained from wells. Barrio contains central Luisa y Antonia.

Santa Clara.—Barrio and village. The village is 1⅛ miles southeast of Rancho Veloz. Consists of a tile-roof brick house, 2 small frame houses with tile roofs, 2 cattle sheds, a half-ruined blockhouse, ruins of an old ingenio, and a few scattered huts built of palm. The blockhouse is built of cement and has one tier of fire of 8 loopholes. Cane raising is the principal industry. Water is obtained from wells and the quality is good. The barrio contains central Ramona.

San Vicente.—Barrio and sitio. Barrio contains the sitio Chavez, besides the sitio bearing its name; plenty of cattle in the barrio. The sitio is situated about 2½ miles east of Sierra Morena and 8 miles northwest of Rancho Veloz. It consists of the ruins of an old sugar mill and a good stone house. Population, about 20. Water obtained from wells.

Chavez.—Sitio. Consists of about 4 houses situated on the seashore 8 miles northwest of Rancho Veloz and 3 miles north of San Vicente. It is connected with both points by wagon roads.

Sierra Morena.—Barrio and town. A small town about 10 miles to the north and west of Rancho Veloz and about 2½ miles from the coast. Population, about 950, mixed. Inhabitants work in near-by ingenios and in the cane fields.

Water supply obtained from wells, springs, and cisterns. Has a post-office and telegraph office, a church, and a few small schoolhouses. There are a few dilapidated blockhouses at the edge of town. Ingenio Santa Lutgarda (Alfonso) lies within the boundaries of the barrio.

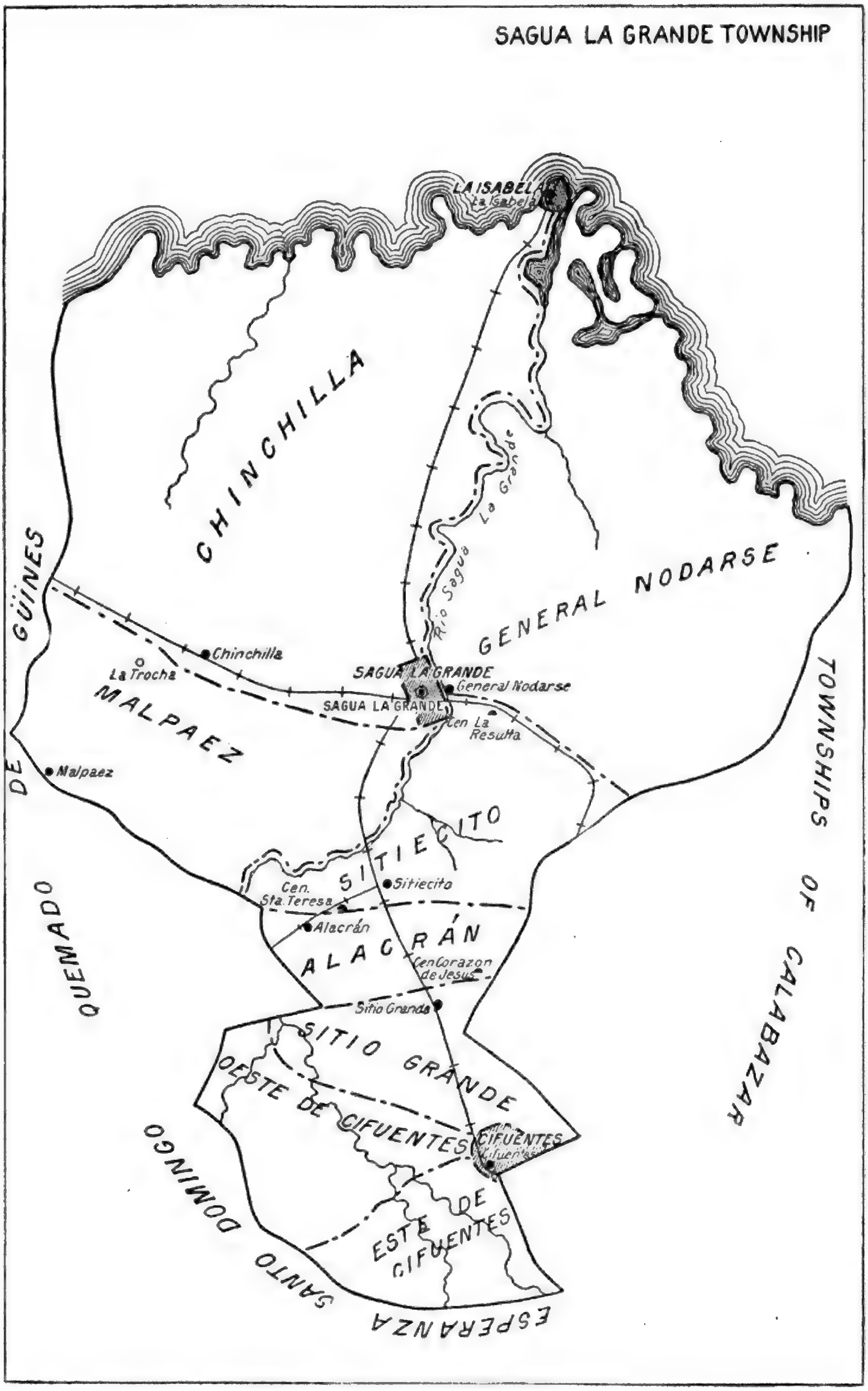
TOWNSHIP OF SAGUA LA GRANDE (CAPITAL, SAGUA LA GRANDE).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Sagua la Grande	Este de la Villa	Urban		6,945
	Oeste de la Villa	do		5,448
	Baire	do		2,405
Alacrán	Alacrán	Rural	6¼	562
Chinchilla	Chinchilla	do	5	765
Cifuentes	Cifuentes	Urban	12½	1,492
	Este de Cifuentes	Rural	12½	422
General Nodarse	General Nodarse	do	(a)	1,149
Isabela	Isabela	Urban	10⅝	1,968
Malpaez	Malpaez	Rural	8½	2,737
La Trocha.				
	Oeste de Cifuentes	do	13¾	604
Sitiecito	Sitiecito	do	5	1,736
Sitio Grande	Sitio Grande	do	9	704

a 90 yards.

Sagua la Grande.—Town. Situated in latitude north 22° 49′ 50″, and longitude west from Cádiz 73° 45′ 36″ (80° 29′ 59″ west of Greenwich). It is 12 miles from the Port of Isabela, also called La Boca and Concha, with which it is in communication by means of the Cuban Central Railroad, making two trips daily, and by the Río Sagua la Grande, navigable for vessels of light draft to the sea. The Cuban Central Railroad also puts it into daily communication with Santa Clara, Cienfuegos, and Havana, the latter city being 259 miles distant.

Sagua la Grande was founded in 1812. The houses as a rule are one-story brick, plastered over with cement. The streets are macadam, fairly well made, and from 25 to 30 or 40 feet wide, excluding the usual narrow 3½ and 4 foot sidewalks. Both electricity and gas are used for the purpose of lighting the streets, dwellings, etc. The town has a church, townhall, board of health, board of education, bank, three public parks, one theater, Spanish Casino, Cuban Club, and one large modern two-story frame schoolhouse. A large stone Jesuit college for boys is situated about 200 yards north of the bridge crossing Río Sagua la Grande. The



SAGUA LA GRANDE TOWNSHIP

town also boasts of a conservatory of music and two public hospitals. It is subdivided into three urban barrios, viz, Este, Oeste, and Baire.

The principal industries are exportation of sugar and some tobacco. The general offices, machine shops, and carpenter and repair shops of the Cuban Central Railroad are also situated here and furnish employment for some 700 employees. The alcohol distillery, a few hundred yards west of the railroad station, has the reputation of exporting a very fine grade of alcohol. There are also two iron foundries, two sawmills, a tannery, large brickyard, several small cigar factories, electric-light and gas plant, three or four printing shops, ice plant, and four daily newspapers.

The population of Sagua is 12,393.

The water supply is obtained from the Río Blanco, which is fed by springs and small tributaries in surrounding hills. The reservoir is 1½ miles west of Viana and 6¼ miles southeast of the plaza at Sagua la Grande. At this point two dams, 160 feet apart, are built across the river; both 3 feet wide on top and 120 feet long and 15 feet high at center of stream. Similar containing walls connecting these dams are in the first stages of construction. When completed this will form a basin 120 feet wide, 160 feet long, and 15 feet deep. There is sufficient water to keep this reservoir constantly filled. In the lower left-hand corner (facing downstream) of the reservoir are two cisterns, one 18 feet long, 15 feet wide, and 15 feet deep. This is divided into two compartments by a concrete partition, the whole resting on a bed of charcoal, gravel, sand, and iron. From these cisterns the filtered water enters a separate receiving cistern, 8 feet long, 6 feet wide, and 15 feet deep. From this cistern the filtered water is supposed to be conducted to Sagua la Grande through a 10-inch iron pipe, 5½ miles long, buried 4 feet underground. This pipe becomes 8-inch, 6-inch, 4-inch, and 2-inch pipe as it reaches different parts of the city. The caretaker states that at the present time (1907) and for at last five years the 10-inch pipe mentioned has passed through the receiving cistern, taking no water therefrom, and along the bed of the reservoir and through the upper dam, and has supplied unfiltered water to the city directly from the river above the reservoir.

It is estimated by the owner of the water system that 60 gallons per day of twenty-four hours are consumed by each inhabitant. This is probably an overestimate. It is believed that the maximum amount available would be limited only by the amount that a 10-inch pipe, with 200 feet fall in 5½ miles, could carry.

The sewers are constructed of soft brick and a poor quality of cement. The largest does not measure over 40 inches, and is on Martí, Maceo, Marta Abreu, and Clara Barton streets. The catch basins are generally situated at each corner of the streets and measure about 25 inches.

The electric-light plant is on Marta Abreu street, a short distance from the railroad passenger station; the gas works are on the same street, about 400 feet south of the electric-light plant. The electric lights are used for lighting the three public parks, the bridge, and the city hall, gas being used for lighting the streets. Most of the dwellings, shops, etc., have either electric-light wires installed or gas fixtures.

Barracks: The buildings in which troops could be quartered are a Spanish casino, a public schoolhouse, a Catholic Church, Cuban Club, Spanish Club, paint shop, railroad-car shed, and roundhouse. The descriptions of these buildings and their locations are as follows:

Spanish Casino, on river front between Martí and Maceo streets. One-story brick building, covered with cement; about 120 by 60 feet by about 25 feet in height; the eastern part of the building has an upper story containing three small rooms. The roof is part tile and part tin. In excellent condition of repair. Sanitary condition of building and surroundings good. Capacity, about 150 men. Water supplied from city faucets; quantity sufficient and quality good. Modern water-closets installed.

Public schoolhouse, on Carmen Ribalta and Céspedes streets. Two-story frame building; tile roof; surrounded by 10-foot porch; eight schoolrooms about 18 by 22 feet; ceilings about 16 feet high. Good condition of repair. Sanitary condition of building and surrounding locality good. Capacity, about 175 men. Water supplied by city faucets; quantity sufficient and quality good. Modern water-closets installed. Entire building surrounded by large yard and iron fence.

Catholic Church, on Céspedes and Padre Varela streets. Constructed of brick, cemented over with plaster, with usual tower and several small rooms in rear. About 130 by 45 feet and about 50 feet in height. Good condition of repair. Sanitary condition of building and locality good. Capacity, about 135 men. Water supplied from city faucets; quantity sufficient and quality good. Modern closets installed.

Cuban Club, on Martí and Carmen Ribalta streets. A brick building, covered with plaster; about 100 by 45 feet and about 25 feet in height. Has court and small tower. Excellent condition of repair. Sanitary condition of building and locality good. Water supplied from city faucets; quantity sufficient and quality good. Modern water-closets installed. Lighted by electricity.

Spanish Club, on Céspedes street, near Padre Varela. One-story brick building, about 50 by 45 feet; tile roof. Small interior court. Good condition of repair. Sanitary condition of building apparently good. Sanitary condition of locality good. Capacity, from 75 to 80 men. Water supplied from city faucets; quantity sufficient and quality good. Modern water-closets installed. Lighted by electricity.

Paint shop, in the yards of the Cuban Central Railroad. Brick building, about 180 by 45 feet and 27 feet high; galvanized-iron roof; ventilation fair. At present in good condition. Sanitary condition of building and locality fair, the ground being low and during rainy season swampy. Capacity, about 140 men. This building has small office in rear, about 15 by 18 feet. Water supplied from city faucets; quantity sufficient and quality good. Lighted by electricity. Rears are about 20 yards from building.

Coach shed in the yards of the Cuban Central Railroad. A building about 160 by 60 feet by about 35 feet high. Galvanized-iron roof; sides half covered with the same material. Good condition at present. Sanitary condition of building and locality good. No modern closets. Capacity about 135 men.

Roundhouse in yards of the Cuban Central Railroad. A circular building, frame; about 30 feet in height; galvanized-iron roof; contains 70,000 square feet of floor space. Good condition. Sanitary condition of building and locality fair. Water supplied from city faucets; quantity sufficient and quality good. Modern urinals; water-closets near by.

Stables: None of any importance. Frame shed on Máximo Gómez and Enrique streets; about 80 by 45 feet and about 18 feet high. Accommodations for about 35 horses. Several small stables in different parts of town; capacity from 10 to 15 animals.

Corrals: Only suitable open ground is just across the river, north and east of town. The ground is high and would make a good corral. Accommodations could easily be arranged for at least from 200 to 300 animals; drainage is good and water could, without much difficulty, be obtained from the river.

Hospitals: There are two hospitals in the town and the Cuban Club could be readily converted into one. Their locations and descriptions are as follows:

Spanish hospital: On Backer street, about 500 yards south of the railroad station. Brick building, about 100 by 70 feet by about 30 feet in height. Modern and in excellent condition. Sanitary condition of building and locality good. Capacity about 50 to 60 cots. Water supplied from city faucets, also from large iron tank; quantity sufficient and quality good. Modern closets installed. Lighted by electricity and gas. There are also several smaller buildings connected with hospital proper, such as storehouse, dead house, isolated or contagious ward, laundry, etc. Two apparently up-to-date operating rooms, in first-class condition. This hospital is surrounded by a large yard and iron fence.

Cuban hospital: On General Lee and Máximo Gómez streets. Constructed of brick; tile roof; about 100 by 100 feet and about 30 feet in height. Good condition of repair. Sanitary condition of building and locality good. Capacity about 120 cots. Water supplied from city faucets, also from large iron tank; quantity sufficient and quality good. Modern water-closets installed. There are several outer buildings, such as isolation ward, dead house, laundry, storehouse, kitchen, etc. These buildings are all surrounded by yard and fence.

Cuban Club: On Martí and Carmen Ribalta streets. This building would make an excellent hospital; its location and condition, etc., are first-class.

Storehouses: There are 5 buildings worthy of mention, the locations and descriptions of which are as follows:

Railroad shed, next to the passenger station of the Cuban Central Railroad. A building about 200 by 60 feet and about 30 feet in height. Galvanized-iron roof; sides covered halfway up with same material. Good unloading platform entire length; siding in good condition.

Freight shed, near passenger station. Constructed partly of brick; about 30 by 250 feet and about 20 feet in height. Galvanized-iron roof. Good facilities for loading and unloading almost the entire length of the building. Also has 18-foot tramway at eastern end.

Car shed, in the yards of the railroad. A building about 40 by 150 feet by about 35 feet high. Galvanized-iron roof. Has good switching facilities.

Warehouse, about 100 feet southwest of the passenger station. A frame building about 200 by 250 feet by about 40 feet in height. Has loading platform about 30 by 40 feet, with good switching facilities. Condition of building fair.

Frame building, about 400 yards north and west of the passenger station and alongside the railroad tracks; about 40 by 125 feet and about 25 feet high. No loading or unloading platform. Condition of building good.

Offices: General offices of the Cuban Central Railroad, at the foot of Martí street; post-office, at No. 26 Martí; telegraph office, at No. 26 Martí; telephone central, at the corner of Colón and Maceo streets; express office (Pan-American), in railroad building foot of Martí street.

Ice plant: Situated at the corner of Colón and Brito. Frame building, about 40 by 100 feet and about 30 feet high. Capacity, claimed, 800 tons daily. Water obtained from the river, wells, and city hydrants.

Camp sites: No good camp sites near by. Across the river, about 200 yards northeast of the bridge, is a plot of ground that would make a fair camp site during the dry season. Ground is somewhat high and would accommodate about

1,500 men. Water readily obtained from city hydrants and plugs. Wood and good grazing near by.

Defenses: Two blockhouses and a trench. The blockhouses are situated, one a few yards northeast of the northern approach to the bridge and the other near the southeastern end of the town, alongside the railroad tracks. They are made with an outer and an inner wall, filled in with earth; about 15 by 15 feet by about 18 feet in height, including small lookout; galvanized-iron roofs. Give good field of fire, especially the one near the railroad tracks. The trench, built by the Spanish during 1897–98, is well washed out, but could easily be put in good condition. It commences at a point near Carmen Ribalta street and the river and runs southeast as far as the railroad tracks, thence west and north as far as the alcohol distillery. The trench affords earth protection of from 3 to 5 feet (some of the places being washed out). The ditch is from 4 to 5 feet deep. With the exception of a small part on the western side of town the trench affords a good field of fire.

Railroads: See storehouses above for siding and switching facilities.

Roads: Backer street leads to Chinchilla, Caguaguas, Quemado de Güines, Rancho Veloz, Sierra Morena, etc. Bull-cart road and pony trail, running parallel to Resulta Railroad tracks, leads to Resulta, Viana, etc.; bull-cart road and pony trail, running parallel to Cuban Central Railroad, leads to Sitiecito and the south.

The western part of town is the best place to attack.

Alacrán.—Barrio and sitio. The central Corazón de Jesús is within the barrio. The sitio consists of a store, a schoolhouse, and 3 or 4 huts. Water obtained from well.

Chinchilla.—Barrio and village. The barrio lies northwest of Sagua la Grande. The village is situated 5 miles from Sagua. It consists of 4 houses, a store, and a blockhouse. Water is obtained from wells. The blockhouse is an old one, built of brick, and two stories in height. Its dimensions are about 12 by 12 by 15 feet. It is in very poor condition and uninhabitable. Could accommodate about 15 or 20 men. It is on low ground and does not afford a very good field of fire.

Cifuentes.—Barrio and town. The town is about 12½ miles southeast of Sagua la Grande, on the main line of the Cuban Central Railroad.

The houses are, as a rule, one-story frame with tile roofs. Has good church, city hall, two schoolhouses, stock pens and good ramp for loading and unloading cattle, post-office, telegraph and telephone station. Population, 1,492. Water obtained from Río Magdalena and from wells; supply apparently plentiful and of good quality. There is a large blockhouse about 1,200 yards from town, on road leading to Santa Clara and Sitio Nuevo. It is of cement, circular in shape, and has two tiers of fire with lookout, 12 loopholes per tier; condition good. Roads lead out of town to Viana, Santa Clara, Sagua la Grande. Northeastern part of town hardest to defend.

Este de Cifuentes.—Barrio. Rural district lying south of Cifuentes.

General Nodarse.—Barrio and village. Barrio is a rural district lying east of Sagua la Grande. The village is just across the Sagua River from Sagua la Grande, and is looked upon as part of that town. Its description and population is included in that of Sagua. It was formerly known as San Juan.

Isabela.—Barrio and town. The town is situated at the mouth of the Río Sagua la Grande and is the port of Sagua la Grande. It is built on a swamp, the solid ground being made. The houses are mostly frame and built on piles. Population, 1,968. Rain water is used almost entirely. Supply is held in large tanks and is delivered in barrels by small boys. During the dry season water is naturally scarce, the supply being guarded by the city officials to prevent waste. There is no sewer system. Town is lighted by oil lamps. The harbor is not an inclosed one, but a roadstead protected by islands. The roadstead is about 12 miles west-northwest by east-southeast, and 6 miles north and south. The greatest depth of water is 28 feet. The principal industries of the town are the shipping of sugar and tobacco. Vessels of 6 feet 4 inches draft go up the river to Sagua la Grande; distance, 21 miles.

Barracks: Three warehouses owned by García & Co. The largest, a frame building with tin roof, is 200 by 40 feet and about 25 feet high. The other two are about 150 by 40 feet and about 20 feet high; frame buildings with tin roofs. Three warehouses owned by Alfert & Co. The largest one is 800 feet long by about 50 feet wide and about 25 feet high; galvanized-iron roof. Good condition at present. The others are smaller and compare in size with the ones owned by García & Co. These warehouses all run out into the bay and are in very good condition. The depth of water at García & Co.'s warehouse is about 7 feet and the depth at Alfert & Co.'s 12 feet.

No stables or corrals.

Hospitals: From 1895 to 1898 the Spaniards used the different wharves and the storehouses described above for barracks and hospitals. Location is considered very healthful, and it is always cool.

Storehouses: Buildings described above, under barracks, could be used as quartermaster and commissary storehouses. Good unloading platforms at Alfert & Co.'s warehouse and railroad wharf.

Town has a telegraph and post-office.

Camp sites: The open space south of the church, with avenues 6, 7, and 8, could be used for camp for a regiment.

Defenses: There is a blockhouse, masonry construction, situated on the east side of the Cuban Central Railroad just south of the town. It is 20 by 20 feet and 10 feet high and apparently in good condition. It has a single tier of fire, and controls the entrance to the town along the railroad, which is the only means of gaining entrance by land. Except for the railroad, the blockhouse is surrounded by mud flats covered with brush.

Roads out of town: One to Sagua la Grande via the railroad.

NOTE.—The fact that the port of Isabela is capable of handling the larger boats; the lighters, wharves, storehouses, railroad sidings, tugboats; its connection with Sagua la Grande by water; its short distance from the general headquarters and shops of the Cuban Central Railroad at Sagua la Grande with abundance of rolling stock, and the fact that troops could be marched directly to Sagua la Grande on the railroad, or to Sitiecito, 4½ miles farther south, where the railroad branches (one branch going southeast to Placetas and the other southwest to Santo Domingo), should make this a rather important place for distribution of troops and supplies in Santa Clara Province.

Malpaez.—Barrio and sitio. The sitio is situated about 8 miles southwest of Sagua la Grande, and consists of 3 houses, a two-story schoolhouse, and a tienda. Water obtained from springs and wells.

La Trocha.—Sitio. Situated about 1 mile southwest of Chinchilla. Consists of a small store at fork of roads leading to Quemado de Güines and Capitolio, respectively.

Oeste de Cifuentes.—Barrio. Rural district lying west of Cifuentes.

Sitiecito.—Barrio and village. Barrio contains the sugar mills Santa Teresa and Resulta. The village is about 4½ miles by road and 3½ miles by Cuban Central Railroad, south of Sagua la Grande, and consists of about 25 houses; part frame houses and part huts. Has a railroad station, telegraph, telephone, and post-office. Population, about 150. Water supply obtained partly from wells and partly from river; supply sufficient and quality good. One blockhouse, more or less in ruins, in the southeast part of village. Cuban Central Railroad branches here to Santo Domingo and to Placetas.

Sitio Grande.—Barrio and village. The village is about 8½ miles south of Sagua la Grande and about 14 miles from Calabazar, on the Cuban Central Railroad. Population, about 200. Water obtained from wells and small stream, but latter sometimes goes dry. In the village are about 15 frame houses and 2 stone houses with tile roofs. One of the stone houses would hold 20 men and 10 horses, and the school 40 men. Telegraph office at railroad station. Siding at station, and loading and unloading facilities good. There is an old dilapidated blockhouse near the village. Roads lead to Sagua, Palmarejo, Unidad, Cifuentes, and Amaro. Best line of approach for attack would be from the north.

TOWNSHIP OF SANTO DOMINGO (CAPITAL, SANTO DOMINGO).

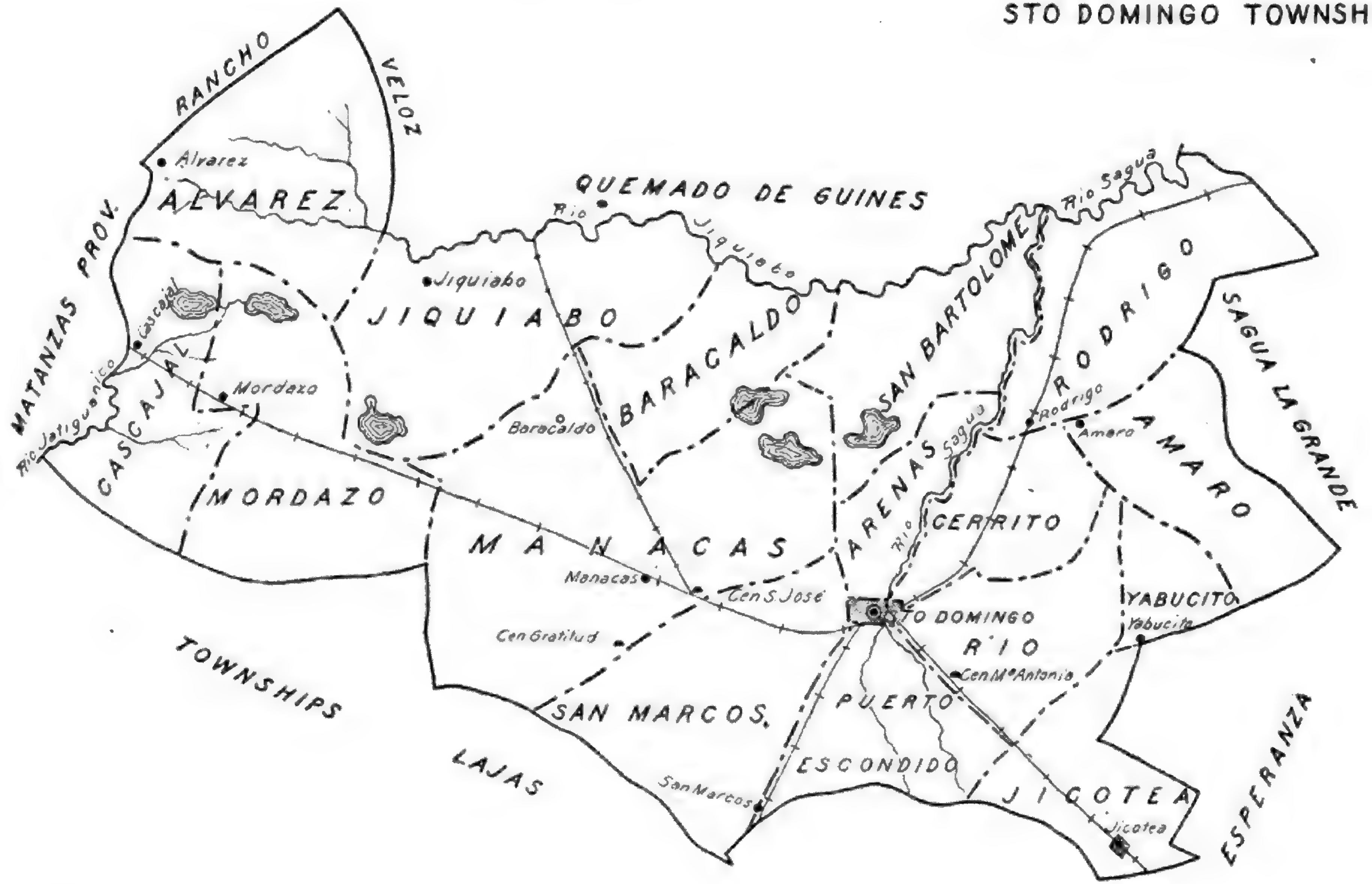
Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Santo Domingo	Este	Urban		1,842
	Oeste	do		1,248
Àlvarez	Àlvarez	Rural	23	846
Amaro	Amaro	do	10	732
	Arenas	do	3	1,630
Baracaldo	Baracaldo	do	10.5	496
Cascajal	Cascajal	Urban and rural.	22	2,343
	Cerrito	Rural	4.3	895
Jicotea	Jicotea	Urban and rural.	7.8	1,755
Jiquiabo	Jiquiabo	Rural	15	456
Manacas	Manacas	do	8	1,783
Mordazo	Mordazo	do	15	1,009
	Puerto Escondido	do	2.1	1,057
	Río	do	3	568
Rodrigo	Rodrigo	do	8.5	1,627
	San Bartolomé	do	6.2	774
San Marcos	San Marcos	do	6.5	319
Yabucito	Yabucito	do	7.8	1,396

Santo Domingo.—Town. Situated 21 miles northeast of Santa Clara on the Cuban Central Railroad, 1 mile from its junction with the U. H. R. R. It is a small town having no important industries, and is supported by surrounding farmers. There is one chief business street, named Independencia, which runs east and west. The buildings are one story high and the majority of private dwellings are frame with tile roofs. Negro section is on north side of town and covers about one-half of town's limit; is fenced with barbed wire and cactus hedges. Huts are small and thatched and hidden among banana patches and cactus hedges.

Population, 3,090.

Water supply: Drinking water obtained from surface wells and cisterns of rain water. Wells have been known to run dry, but it is unusual. Last severe drought took place in 1902, and drinking water was taken from Río Sagua la Grande, one-half mile east of the town. At this point the Cuban Central Railroad crosses the river over a single-track wooden bridge (trestle). Food and watering place for stock close to the bridge, upstream. Drinking water plentiful at all times. Río Sagua is a small stream, but there is always sufficient water for stock. Well water in town should be boiled. Well water on plantations in vicinity of the town is safe when at sufficient distance from latrines. Wells and

STO DOMINGO TOWNSHIP



cisterns not properly protected. Wells are numerous—one well for each house in most cases.

Surface drainage is depended upon for disposal of waste waters. No public street lamps are used.

Barracks: 1. Old Spanish barracks; one-story frame building with tile roof; on calle Independencia, 600 yards west of edge of town, 800 yards to the north of Santo Domingo junction; stands alone on slightly high ground; condition good; surrounded by large grounds. Building about 30 years old, but still serviceable, and will accommodate 200 men; in cases of emergency would accommodate 400 men. Good kitchen; water supply from well 10 yards in rear of barracks; water clear and of good quality, but slightly hard; pronounced safe for drinking, without boiling, by medical officer; never known to run dry. Camp latrines must be dug in rear of barracks.

2. Schoolhouse; one-story frame building with tile roof on calle Independencia (south side) between calle Céspedes and calle Maltiempo. Condition very good; capacity, 40 men; in case of emergency would accommodate 80 men. Small kitchen in rear; water supply from well in rear of building; water should be boiled. Cuban latrines in rear; not in good condition.

3. Catholic Church; stone structure with tile roof. Priest in charge has small quarters in rear. Occupies rectangular plot of ground facing small plaza in calle Independencia and calle Jiquiabo, near business center of town. Condition very good. Size of building 50 by 150 feet. Room for 300 men in case of emergency. Water supply from surface well in small yard near priest's quarters; water should be boiled.

4. Town hall; stone, two-story, tile-roof structure. At corner of calle Jiquiabo and calle Maceo, in center of town. Will accommodate 200 men; room for 400 men in case of emergency. Large kitchen in small courtyard in rear. Stalls for 8 horses built against north wall of building. Water obtained from well in small courtyard; should be boiled. Latrines in poor condition.

5. Railroad station at Santo Domingo Junction. Stone building, situated 1 mile west of Santo Domingo station, which is 800 yards west of edge of town; surrounded by open country. Station master has small quarters at west end; rail-

road restaurant at east end will seat 35 persons. Main building open. Temporary accommodations for 100 men. Freight building 20 yards north of station. Water supply from surface well, with trough for stock; 50 yards west of station master's quarters. Quality very good; safe for drinking without boiling; quantity abundant.

6. Railroad station at Santo Domingo is a wooden building. Freight shed south side of track. Capacity, 60 men. Station master's quarters east end of building. Small brick ticket office opposite side of track. Location, 1,700 yards northeast of Santo Domingo Junction and on east edge of town at foot of calle Maltiempo. Water supply: Cistern water can be had at small hotel opposite station; well water must be drawn from farmhouse 300 yards down track; water should be boiled. Railroad track crosses Sagua la Grande River 1,600 yards to the northeast. Good ford on south side of trestle bridge and water for stock.

There are no public stables. Stalls for 8 horses are built against the north wall of the town hall, situated at corner of calle Jiquiabo and calle Maceo in center of town.

There are no corrals suitable for transportation. There is a good location at east end of calle Independencia near intersection of Cuban Central Railroad; 300 yards north of Santo Domingo railroad station. Open country; good ford and watering places 800 yards to the north, on east side of railroad trestle bridge. There is a small corral, with loading chute, on siding near freight shed at Santo Domingo Junction. Water for stock must be carried from surface well at railroad station.

There is no hospital. For building suitable for same, see those described under barracks.

Quartermaster and commissary storehouse: Santo Domingo Junction—Freight house on siding near station and next to the corral; cars unload directly into building; size of building, 80 by 40 feet. Santo Domingo station—Freight house and loading platform opposite ticket office; siding runs alongside both buildings and platform; size of building, 60 by 30 feet; size of loading platform, 90 by 30 feet.

Location of important offices, etc.: Railroad station, at junction of U. H. R. R. and Cuban Central Railroad. Santo Domingo Railroad station, at foot of calle Maltiempo. Post-office, calle Eustaguito Delgado, south of calle Independencia, near corner. Telegraph station, calle Independencia between calle Céspedes and calle Maltiempo. Townhall, corner of calle Jiquiabo and calle Maceo. Telephone central, corner calle Independencia and calle Libertad.

Camp sites: Open field next to old Spanish barracks on Camino Central de la Isla. Ground slopes slightly to north; ample ground for regiment; no wood; water must be drawn from surface wells.

Open field east end of Calle Independencia across Cuban Central Railroad. Good natural drainage toward Sagua River; ford and drinking place for animals on south side of railroad trestle bridge; no firewood in surrounding country; capacity, a brigade.

Six small wooden blockhouses surround town. Construction: One-inch planking 14 inches apart, inner space filled with earth; one story high; 15 feet square.

There are three railroad sidings at Santo Domingo Junction: One on each side of stone station house, capacity of each 20 cars; one siding alongside freight house, capacity 40 cars. No loading platform; cars unload directly into freight house. Small corral near freight house has a chute.

There are two sidings at Santo Domingo station, foot of calle Maltiempo: One on each side of main track; capacity of north siding, 20 cars; capacity of south siding, 30 cars. Freight and loading platform on south siding.

Roads lead out of town as follows: Camino Real Puerto Escondido leads southeast to Jicotea, Esperanza, and Santa Clara; Camino Bermejal leads generally north toward Bermejal; Camino Central de la Isla leads generally northeast toward Sagua la Grande.

Best lines of attack are from railroad junction (south of town) and from southeast.

Álvarez.—Barrio and village. The village is about 3 miles north of Cascajal on the U. H. R. R., and 23 miles northwest of Santo Domingo. The railroad station at Cascajal is also called Álvarez. Wood is obtained here for sugar mills in vicinity and people of the village are engaged in cutting it. Level country surrounding; fields in the vicinity fenced with barbed wire and but little cultivated. One main street. Total number of houses about 30, principally frame structures with thatched roofs. Stone church in center of village; capacity, 100 men. Water supply obtained from wells. Population, 250. A new railroad is in course of construction which begins at a point between Cascajal and Mordazo, runs to Crucero, and from there to this point.

Amaro.—Barrio and village. The village is 10 miles by road northeast of Santo Domingo, and consists of about 15 frame houses and 1 hotel. About 50 men could be sheltered. Population, 200. There are five mineral springs, which are about 200 feet above surrounding country; water considered excellent and the quantity is unlimited. Good camp site for at least 5,000 men. A regiment of Michigan Volunteers camped at this place in 1898. In order to accommodate the above number of men it would be necessary to build a spur about 2¾ miles long from the railroad station Rodrígo. Wood can be obtained near by. There is one old brick and cement blockhouse; rectangular in shape; one tier of fire, 6 serviceable loopholes per tier; condition bad.

Arenas.—Barrio. A section of country north of Santo Domingo. There is no point bearing the name, but it contains the fincas and colonias of García, San Jacinto, Potrerillo, Esperanza, Bermejal, and Monasterio.

Baracaldo.—Barrio. Rural district northwest of Santo Domingo.

Cascajal (*Álvarez*).—Barrio and town. The town is 22 miles northwest of Santo Domingo. Population, 1,140. Water supply, surface wells. Barracks, stone Spanish fort north of railroad opposite railroad station. Clear field of fire on northeast and west fronts for from 40 to 60 yards. Tile roofed, limestone building; walls 2 feet thick. Plan is rectangular; 80 by 125 feet. Low, square, flanking tower on northeast corner; loopholed for small arms. Two wooden gates. South gate faces railroad; north gate opens directly on courtyard of fort. There is a kitchen for garrison and covered stalls for 30 horses. On the south and west sides of court are quarters and storerooms of garrison. No transportation corrals. Suitable ground for same west of fort and alongside railroad. Nearest watering places are water tank, well at railroad station, and well at north end of fort. Town is small and has no important offices. Camp site: Open sandy ground west of town and south of railroad; good well and water tank near station; no wood; good grazing. Railroad siding opposite station; capacity, 60 cars. Small freight house close to station; no platform. Roads in vicinity are mere trails, which are not fixed except in general direction. Best lines of approach for attack are from west and from north.

Cerrito.—Barrio. A section of country northeast of Santo Domingo. There are neither towns nor villages in the barrio. It contains the following fincas and colonias: Solatario, Espinosa, Aguadita, Cubano, and Aguilar.

Jicotea.—Barrio and town. The town is 4 miles north of Esperanza and 7.8 miles southeast of Santo Domingo. Population about 800. Principal industries are the cultivation of cane and tobacco. Water supply obtained from wells. No streams near. Small rural guard quarters in fair condition. No transportation corral; no open space suitable for same, and no stables. Freight house opposite the railroad station could be used for hospital; capacity about 50 beds. Could also be used as quartermaster or commissary storehouse, as small side track runs along building. Telegraph and telephone office in railroad depot; post-office is second building south of railroad station. One tobacco warehouse south of post-office could be used as barracks for about 2 troops; small building in rear could be used as stable; good well in rear of building. Two small blockhouses (one story) on north and south sides of town. A road leads north to Yabucito, one east to San Diego del Valle, and one south to Esperanza and San Vicente. Best line of approach for attack is from the south.

Jiquiabo.—Barrio and village. The village is about 9 miles south of Guayabo and 15 miles northwest of Santo Domingo, and consists of a schoolhouse and about 30 frame, thatched-roof houses. Population about 150. Water obtained from wells.

Manacas.—Barrio and village. The sitio Baracaldo and centrals San José and Gratitud are in the barrio. The village of Manacas is a small railroad station on the U. H. R. R., about 8 miles north of Santo Domingo. Population about 300. Water obtained from wells; supply and quality very good. Has large charcoal yard, hotel, two schoolhouses, post-office, telephone, telegraph office, three blacksmith shops, and a number of houses. There are two blockhouses, one wood and one cement, situated, respectively, on west and east side of railroad station; have good command east and west of station. Wooden blockhouse is rectangular in shape, has two tiers of fire with 8 loopholes per tier, and its condition is good. Cement blockhouse over water tank; rectangular in shape; two tiers of fire, 8 loopholes per tier; condition good. At the railroad station is a stock chute and side track. Surrounding country flat.

Baracaldo.—Sitio. Situated 10½ miles northwest of Santo Domingo and 5 miles north of Manacas. Consists of 5 or 6 thatched houses. Water obtained from wells.

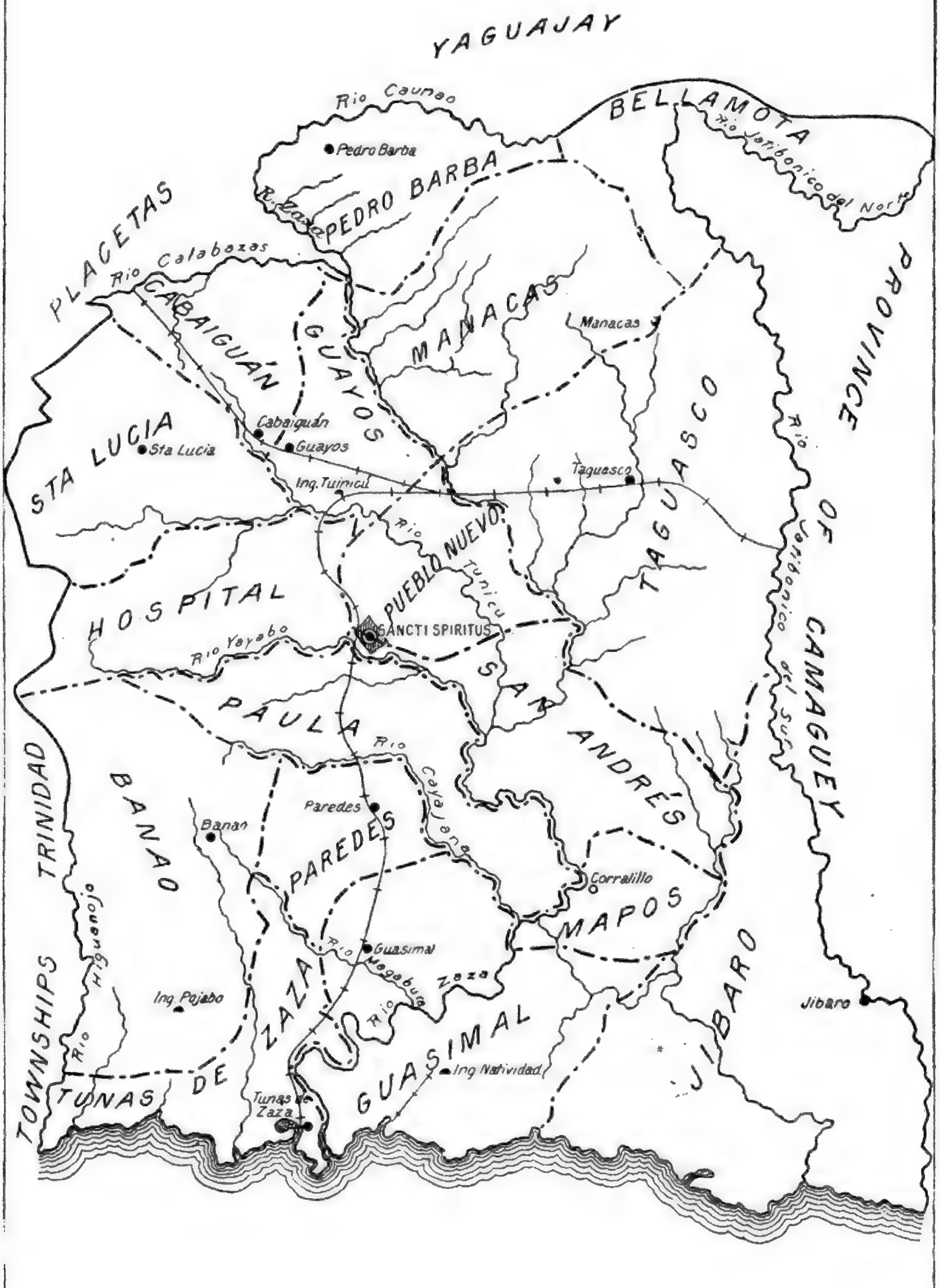
Mordazo.—Barrio and village. The village is about 15 miles northwest of Santo Domingo and consists of about 30 frame, tile-roofed houses. Population, about 350. Has telegraph office, post-office, telephone station, and railroad siding and crane. Water obtained from wells. One two-story blockhouse at the railroad station. During the rainy season there are two lagunas, one about a mile northeast and the other about a third of a mile south of the village.

Puerto Escondido.—Barrio. A rural district south and southeast of Santo Domingo. A great deal of the land is savanna. No towns or villages in the barrio.

Río.—Barrio. A section of country east of Santo Domingo. Contains neither towns nor villages, but has the following fincas and colonias: Tres Carolinas, Cárdenas, Recreo, and La Criolla; also the central Maria Antonia.

Rodrigo.—Barrio and village. Village is 12 miles southwest of Sagua la Grande on Cuban Central Railroad, and 8½ miles by road north of Santo Domingo. Consists of about 40 houses, a schoolhouse, blacksmith shop, and carpenter shop. Houses are small frame affairs with tile roofs. Population, about 400. Water obtained from springs and wells. The springs are three-fourths of a mile south of the village on road leading to Amaro. Water is also hauled from the mineral springs at Amaro, situated about 3 miles south of the village. There are 3 blockhouses at this village. One circular, cement blockhouse in the west part of village; two tiers of fire, each tier having about 12 loopholes; serviceable; condition fair. One rectangular, cement blockhouse near rural guard quarters; one tier of fire, having about

SANCTI SPIRITUS TOWNSHIP



12 loopholes; serviceable; condition fair. One rectangular cement blockhouse at east exit of village; two tiers of fire, each tier having about 12 loopholes; condition good. Roads lead to Santo Domingo, Quemado de Güines, Mango Largo, and Amaro.

San Bartolomé.—Barrio. A large section of country 3 miles northwest of Jicotea.

San Marcos.—Barrio and village. The village is at the station of San Marcos on the Cuban Central Railroad about 6½ miles northeast of Santo Domingo. Population, about 100. Consists of a frame railroad station, three small frame stores, and five or six huts. There is a sidetrack, a small loading platform, and a water tank. Water supply obtained from wells.

Yabucito.—Barrio and sitio. The barrio is a section of country 4½ miles northwest of San Diego. Name also applies to a crossroads 7.8 miles by road southeast of Santo Domingo. At this point are a two-story frame, tile-roofed store, several ruined blockhouses, and a few thatched huts. Water obtained from wells. Roads lead to Jicotea, San Diego del Valle, Santo Domingo, Yabú, Rodrigo, and Cifuentes.

JUDICIAL DISTRICT OF SANCTI SPIRITUS.

Township:	Population.
Sancti Spiritus	36,572

TOWNSHIP OF SANCTI SPIRITUS (CAPITAL, SANCTI SPIRITUS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Sancti Spiritus	Pueblo Nuevo	Urban and rural.		5,542
Banao	Banao	Rural	10.5	571
	Bellamota	do	23.7	1,489
Cabaiguán	Cabaiguán	do	12	2,912
Guásimal	Guásimal	do	13.5	1,663
Mapos.				
Guayos	Guayos	do	8.7	4,269
Yayabo	Hospital	do	6.2	4,481
Las Pozas.				
Macaguabo.				
Jíbaro	Jíbaro	do	27.5	648
Manacas	Manacas	do	18	1,044
Corralillo	Mapos	do	15	152
Paredes	Paredes	do	8.5	585
	Paula	do	4	3,955
Pedro Barba	Pedro Barba	do	20	1,273
	San Andrés	do	10.1	3,462
Santa Lucía	Santa Lucía	do	13	1,841
Taguasco	Taguasco	do	15	1,833
Tunas de Zaza	Tunas de Zaza	do	25	852
Macano.				

Sancti Spiritus.—Town. The town covers almost 1 square mile of ground, is built almost entirely of brick (mampostería), with tile roofing, and nearly all houses are very old. It is the seat of government of the municipality of the same name, and is about 50 miles southeast of Santa Clara, in the southeast corner of the province of Santa Clara. Soap, candles, cigars, liquors, tile, and brick are manufactured. There are several tanneries, a bottling plant, six large general stores, and over a hundred small ones; two large hotels and three small ones. In the municipality stock raising is the principal industry, with sugar, tobacco, fruits, and coffee following in the order named. Much hard wood is also exported from the district. Part of the town lies in the barrio of Pueblo Nuevo and part in the barrio of San Andrés.

Population, 17,440.

Water supply is obtained from the Yayabo River, which rises in the Trinidad Mountains and flows through south end of town. Pumping station, 500 yards west of central plaza; reservoir, 100 yards north-northeast of pump and 60 feet above town. Yayabo River flows into the Zaza River, 6 miles southeast. Tuinucú River flows 5 miles north of town. The quantity is plentiful at all times for drinking, watering stock, and bathing. Capacity of pump, about 450,000 gallons in twenty-four hours. Capacity of reservoir, 150,000 gallons. Main about 7 inches in diameter, and length about 5 miles. Yayabo River is low in dry season. Tuinucú River is a large stream. Zaza River is second in size in island. Supply of town obtained entirely from water system. The quality of water is excellent; both natives and foreigners use it without sterilization. Nothing on river above town to pollute it; considered safe to drink water from river above the town.

Surface drainage for sewage. Electricity is used for lighting; power from Yayabo River near Sierra; plant about No. 1 San Silvestre street. Gas is also used, plant being situated south of city.

Barracks: Ayuntamiento, mayor's office, office of chief of police and jail, No. 30 Independencia street; three-story brick; capacity, 200 men. Third story and roof overlook town; is in good repair. Running water in closets, but they are in poor condition. Presbyterian school building, property of the government, on central plaza; capacity, 250 men; two-story brick; condition is fair, and part is in good condition. City water in building, but it has but one small water-closet.

Market building, corner of Independencia and Coco streets; good repair; would accommodate 200 men; running water; no closets.

Jail, northeast of town, at east end of San Cristóbal street: high and healthy; in good repair; would accommodate 150 men; city water; modern closets; water could be cut off easily as reservoir is on the other side of town and water comes through the city; pipes barely under the surface.

Theater, Puente street, near bridge over Yayabo River; good condition; capacity, 75 men; south wall commands bridge and ford approaches.

Barracks of rural guard and old church Jesús Nazareno, on plaza of that name; is in poor repair, but fit for use; city water; poor closets; would accommodate 200 men.

Del Valle Railroad station, south of town; large building of brick and wood, 200 yards from bridge across Yayabo River; would accommodate 150 men, but its best use would be as a storehouse. Churches La Iglesia and La Caridad would accommodate 60 to 75 men each in an emergency. Clubs El Progreso, La Colonia, and Sancti Spirituano could be used as barracks or hospitals in time of war; city water, and in excellent repair; capacity, about 100 men each. There are also 10 or more large private houses which would accommodate 40 to 60 men each.

There are no stables which would accommodate more than 6 horses.

Corrals near Del Valle Railroad station; loading chute 12 feet wide; capacity of corrals, 800 cattle. Corrals near Cuba Company station; capacity, about 500; two 6-foot loading chutes; no water near in dry season.

Hospitals: During the revolution of 1895–1898 about 20,000 Spanish troops were in and about Sancti Spiritus, that city being headquarters and base of supplies for them. Later, under Weyler, the city and country about 3 miles around was converted into a great concentration camp, all noncombatants from region within 20 to 25 miles about being brought here. Though there was much sickness and also suffering from lack of food, no information can be had of hospitals used for these reconcentrados, and all hospitals hereafter mentioned were used for Spanish troops.

Near the jail on a low hill northeast of town there were three buildings used as hospitals. One of these is now standing and is still used as a hospital. One of the other two buildings stood in front of and one in rear of the present building, but have since been destroyed. The site is excellent for the purpose, being an elevation overlooking the town, at its edge and apart from other buildings. It is cool, breezy and healthful. The present building contains 100 beds and has a capacity for 200 more. It is a brick building in fair repair, and is fairly well equipped.

In the large church and convent (on the Central plaza, between Máximo Gómez and Independencia streets), part of which is now used for Presbyterian Church and school, was another hospital. To this were sent yellow fever and smallpox cases, etc. A more unsuitable site for infectious diseases could hardly be found. Part of this building has been destroyed. The remainder is in fair repair, is of brick, square and with large patio; would accommodate about 200 beds; city water and two modern closets; now used as a school; could be used as barracks or hospital but its central location unsuits it for latter purpose.

On Luz street, between San Cristóbal and Santa Inés streets, was a hospital of 40 or 50 beds. It is now a carpenter shop and lumber yard. This has city water, but is in no way suited for use as hospital. In Céspedes street, near Coco, where there is also a carpenter shop, was another small hospital, but badly located and unsuited for such use.

In Amargura street, corner of Paula, where now is Robles' livery barn, was a hospital, also badly located and unsuitable.

All of these hospitals used the same water supply as the town of Sancti Spiritus. All were in bad condition. With the exception of hospital first mentioned, all houses chosen for such use seem to have been chosen merely as the most convenient at the moment, regardless of their suitability. As before indicated, they were necessary because a large force was present, and the place was the center of operations.

No hospitals were established outside of the zone of concentration.

No storehouses near a railroad station, except the Del Valle station (not connected by railroad with the Cuba Company station). The large stores of either Lorens or Sigues, on Independencia street near Coco, might be used, but they have no tram or railway communication with either road. Each of these places is about 60 by 80 feet and 30 feet high. The Del Valle station is built of brick and wood; 150 by 40 feet; railroad siding and unloading platform about 100 feet long.

Location of principal offices: Ayuntamiento, mayor's office, and police station, No. 30 Independencia street; telegraph and post-office at 5 and 7 Máximo Gómez street; telephone central at No. 10 Príncipe street. Telephone, private, to Tunas de Zaza and other points on the Tunas-Sancti Spiritus Railroad, at Del Valle station, No. 2 San Silvestre, and in two-story house at corner of Amargura and Puente streets; telephone, private, to Jíbaro, at house of Mr. Reyes, corner of Puente and Amargura streets. Court rooms (court of first instance), opposite the ayuntamiento on Independencia, Príncipe, and San Rafael streets.

Ice machine, capacity 5 tons, at pumping station.

Camp sites: 10 acres, east of city, along Yayabo River; good water; grazing; high and well drained, but no wood near; difficult to get into city from this site on account of deep arroyo; is undesirable because it is situated on the river below the town and the ground is cut by small dry runs, the flat places being between.

Three-quarters of a mile south of city, in bend of Yayabo River; river is between this site and town; good water and grazing, and wood one-half mile away.

Site for 400 men on hills west of town; water from Yayabo River; grazing; one-half mile to wood; location high and healthy and commands the town.

Site for 100 men in park (private) near pumping station; good water and grazing.

Forty men could camp in Central plaza.

There is a very good ground sufficient for 2 regiments east of town and back of the hospital and jail. It is hard sabana land, high and sanitary, and rains make little difference as it drains to two sides. Water would have to be brought from the city or 300 yards of main laid from the city system. Three hundred yards farther west is a small stream with good water for stock. It would be necessary to cart wood from 1 to 2 miles. Back of hills to west of town is much good camp ground with about the same conditions as to water and wood as mentioned for the sabana land to the east. The ground is more rolling and not so good in that respect, but it has the advantage of being just back of the best military position; is well drained, and near the river above the town, and for that reason would be best for forces operating against the town.

Defences: Fort San Pedro consists of 2 buildings, about 60 by 40 feet each, and connected by 7-inch walls inclosing court of about same area. Brick buildings; walls average 14 inches in thickness; loopholed throughout at 3-foot intervals. Probably constructed for dwelling, but has been used by both Spanish and Cubans as fort; is private property. Water supplied by city system, but force only sufficient to carry water to hydrant some 60 yards away; reservoir on hill 250 yards to south; fort situated west of city on hill 80 feet above town, near road extending from San Cristóbal street, and 600 yards from center of town; commanded by hill 500 yards farther west; hill 250 yards to north about same height.

Brick blockhouse one-half mile south of town on Trinidad road; another to the south on river bank at foot of San Agustín street; another on old Príncipe road, about one-fourth mile from center of town; another east, near jail, on road leading from San Cristóbal street past jail; one east of town, one-half mile from center, on crossroad joining Príncipe road some miles out; another north, one-half mile, on hill commanding Cuba Railroad station and Guayos and Tuinucú roads. All these blockhouses are built of brick; 15 feet square; walls 12 inches thick; two tiers of fire; 7 or 8 loopholes to each face, with place for lookout on top. Closed by sheet-iron door on town side. Those on Trinidad road, crossroad east, and near jail, are unfinished, being without roof, floor for second tier, and iron door. Those on Agustín and Príncipe streets have no iron door.

The terminus of the Cuba Company Railroad branch from Zaza del Medio is at the north end of Independencia street; 300 yards of siding, a Y for turning, stock corrals, and loading chutes near by; platform 30 by 60 feet, and frame station 30 by 60 feet.

The terminus of the Tunas-Sancti Spiritus Railroad is south of town, 200 yards from the stone bridge across the Yayabo River (the station is usually called Paradero Valle from the name of the owner, Francisco del Valle). The station is of brick and wood, and is 150 by 40 feet; 5 sidings, about 150 yards each; turntables and repair shops; two tanks of about 3,000 gallons capacity each. This road is in very poor condition. The rolling stock is barely good enough to use. The bridges are old and weak and, in general, travel on the road is slow and unsafe. The Del Valle road is not connected with the branch of the Cuba Company.

Roads out of town: Road from north end of Independencia street to Guayos and Cabaiguán; a road turns to left half a mile out and leads to mill of Tuinucú Sugar Company; both roads good. Just before reaching the fork mentioned is an iron bridge, lattice girder, one 60-foot span, over arroyo, now dry; 15 feet from bridge to dry bed of creek; banks steep. If bridge is down, pass in rear of cemetery.

Road northeast to Arroyo Grande; rough, but used by ox carts. Road northeast to Zaza del Medio and Taguasco; rough, and ford at Zaza River very difficult; used by ox carts. Road east through Sabanilla de Lara to Ciego de Avila and Camagüey; practicable for ox cart transportation. Road southeast to Las Bocas and Jíbaro; practicable for ox carts; almost impassable in wet season. Road south; 4 miles out turns to left for Guásimal; straight on to Banao; both roads very rough but practicable for ox carts. Road west to Sierra; very difficult for anything but horses and pack animals.

Another road runs to farm Franco, about 4 miles from the city; branch to left 1 mile out connects with Sierra road; a good road, but has one difficult grade at ford of Yayabo River; passable by doubling up. Road northwest through Macaguabo and Santa Lucía to Placetas and Santa Clara (old Havana road); it is very rough and in places practicable only for horse and pack.

NOTE.—Roads to Jíbaro, Guásimal, Banao, and Sierra leave Sancti Spiritus over a solid masonry (stone) five-arch bridge, 20 feet wide, across the Yayabo River; has stood for centuries. Approaches can best be defended from behind brick walls of houses along north bank and the theater.

The best line of approach for attack is from the hills to the west; artillery should approach from northwest, coming in on Guayos road and swinging around to the west. The hills to the west afford cover and two of them command Loma de la Cruz, on which stands Fort San Pedro, at distances of 300 and 600 yards. On the south the Yayabo River, on the east the Arroyo Santa Ana and low and broken ground, and on the north open country lying beyond hills close to the town present difficulties.

Banao.—Barrio and village. The village is 10.5 miles southwest of Sancti Spiritus. Population, about 75. Consists of a brick store (could be used to defend road) and 12 thatched houses, all lying on right bank of Banao River. Cattle raising is the principal industry. Water obtained from Banao River; excellent quality, as it comes direct from the hills; abundant at all times; taken direct from river in buckets as required. No post-office or telephone. Camp site of about 20 acres across river from village; grazing; wood along river above village and water from river. Barrio contains ingenio Pojabo.

Bellamota.—Barrio. This is a large grazing and wooded district about 9 miles southwest of Mayajigua and 42 miles northeast of Sancti Spiritus. Contains a number of scattered thatched houses. It is 20 miles from the nearest railroad. Nearly all traffic passes through Mayajigua to the coast at Estero Real. Post-office for this district is Mayajigua. The capital of the barrio is Jusepi, which consists of one farm house, and is the residence of the alcalde.

Cabaiguán.—Barrio and village. The village is on the Cuba Company Railroad 12 miles northwest of Sancti Spiritus and consists of 5 stores and about 65 small wooden houses. Population about 600. Water obtained from wells.

Guásimal.—Barrio and village. The village is 13½ miles south of Sancti Spiritus on high ground south of Arroyo Guásimal. It has 3 stores, 7 brick and 8 frame buildings, and over 100 thatched structures. Population, about 750, mostly families of men working at ingenio Natividad or in cane fields. Has no industry, but inhabitants subsist largely from gardens about their houses. Cattle raising chief industry in surrounding country. Village has three schools. Water supply is obtained from cisterns and arroyo; should be boiled; is scarce in dry season. No street lamps. Schoolhouse would shelter 50 men and railroad station 30. No other buildings suitable for military purposes. Has a post-office and railroad station. Camp ground on outskirts of village for 100 men; 200 yards to wood; 300 yards to water; high ground and well drained; good grazing; commands main street of village from brick ruin (loopholed). There is a 200-yard siding on railroad; frame station 60 by 30 feet, and stock corral with loading chute. At the station is an unloading platform 100 feet long and 10 feet wide. No telegraph. Telephone to Sancti Spiritus and Tunas. Roads lead northeast to Las Bocas; southeast to Nipero on Zaza River (ford); south to Arroyo Mayibana, Natividad. and Zaza; west to Montería; northwest to San José. Best line of approach for attack from northeast or east. Bridges: Bridge 60 feet wide; three 20-foot spans, composed of rails resting along two sleepers, no cross-ties; all supported by stone piers; fifteen feet above stream (the Guásimal). The barrio also contains the sitio of Mapos and ingenio Natividad.

Mapos.—Sitio. About 20 miles south of Sancti Spiritus and consists of half a dozen thatched houses, a sawmill, and the nongrinding sugar mill Mapos. The place was formerly called Chorrera Brava.

Guayos.—Barrio and village. Central Tuinucú is in the barrio. The village is on the Cuba Company Railroad 8¾ miles slightly northwest of Sancti Spiritus, and consists of 13 wooden houses and some stores. Water obtained from stream and wells. Railroad station with side track for about 5 cars.

Hospital.—Barrio. A rural district lying northwest of Sancti Spiritus. In the barrio are the sitios of Yayabo, Las Pozas, and Macaguabo, at which places there are stores.

Jíbaro.—Barrio and village. The village is 27½ miles southeast of Sancti Spiritus, on right bank of river Jatibonico del Sur. Population, about 300. Houses are built of frame and guano and have thatched roofs. Stock raising principal industry in vicinity; many people employed shipping timber from Embarcadero Juan Hernández, 12 miles south, through which most supplies for village are brought. Three cart factories in village. Water obtained from wells and river; all good quality; plentiful at all times; distributed in cans or buckets. Quarters of rural guard hold 10 men; private property. Schoolhouse would accommodate 20 men if seats were removed, and clubhouse would accommodate 50 men temporarily. Corral in center of village; water near; grazing. No warehouse, but any of frame houses on main street could be used. Telephone (private) to Sancti Spiritus from house of Mr. Rafael Reyes. Camp site for about 300 men near village. Road to Sancti Spiritus good for wagons in dry season, though there are several steep grades. In rainy season passable only by horses; mud very deep. Road to Juan Hernández Estuary is good in dry season for carts; impassable in rainy season. During rainy season other roads are difficult for any kind of transportation except for a few miles out of village. Best line of approach for attack is from southwest or south.

Manacas.—Barrio and sitio. The sitio is 5 miles southwest of Jobosí and 18 miles northeast of Sancti Spiritus and consists of a store and a thatched house. There is an earth redoubt for two companies situated at fork of roads. It commands roads north to Jobosí, south to Sancti Spiritus, and a road running east and connecting with Jatibonico del Sur Valley. Water supply for the redoubt is obtained from well; in bad condition. Stream near at hand with good water. There is a camp site for a brigade east of sitio; water and wood plentiful.

Mapos.—Barrio. A rural district lying southeast of Sancti Spiritus and containing the sitio of Corralillo.

Corralillo.—Sitio. Situated about 12 miles southeast of Sancti Spiritus and consists of a few houses scattered along the Guásimal-La Palma road. The river Zaza is near by.

Paredes.—Barrio and village. The village is 8½ miles south of Sancti Spiritus on the Tunas and Sancti Spiritus Railroad, the station of which road at this place is named Casariego. Consists of 4 brick, 12 frame, and about 60 thatched houses. Population, about 200; a majority are negroes of the poorest class. No industries of importance. Wood cutting and cattle herding principal occupations. Many negroes live almost wholly on their garden produce. Two schools in the village. Nearly all water used is taken from large well, which is 10 feet in diameter, 70 feet deep, and has 30 feet of water. There are also two smaller wells. Quality of water excellent. Railroad station, brick, 70 by 18 feet. Building to north of station, brick, 40 by 18 feet; used as storehouse. Schoolhouse, frame. Club, frame; would serve equally well as barracks or hospital. Station and building to north more suitable for storehouses; platform 150 by 10 feet. One hundred yards of siding at station. There is a post-office and a telephone to Tunas and Sancti Spiritus in railroad station. No telegraph. Good camp site for 100 men north of railroad station. Water from well; supply not sufficient for greater number; wood and grazing plentiful. Good place for corral near at hand. One blockhouse, of iron rails, 600 yards south of railroad station. Roads leading out of village: West to Blanquial or Blancocal; east to Sancti Spiritus, Nipero, and Las Bocas; south to a farm and Guásimal; horse trail north to Jarao. Attack from west if hill is held; otherwise from north. Wood used as fuel by Tunas-Sancti Spiritus Railroad is collected at Paredes.

Paula.—Barrio. A rural district lying south of Sancti Spiritus.

Pedro Barba.—Barrio and sitio. The point bearing the name is 14½ miles northwest of Manacas and 20 miles north of Sancti Spiritus, and consists of a store, a schoolhouse, and 3 thatched houses.

San Andrés.—Barrio. A rural district lying southeast of Sancti Spiritus. Part of the town lies in this barrio.

Santa Lucía.—Barrio and village. A rural district about 13 miles northwest of Sancti Spiritus. The point named Santa Lucía is at the junction of road from Cabaiguán with old Havana road (Sancti Spiritus-Santa Clara). The houses are scattered here and there and are made of palm. Probably 200 persons reside within a radius of a mile. Principal industries are raising stock, tobacco, and coffee. Water is piped to most farms from streams in hills to northwest. There are few wells; quality of water, very good. One company could be camped at point called Santa Lucía.

Taguasco.—Barrio, railroad station, and village. The village is about 15 miles northeast of Sancti Spiritus. Population of village, about 50; of railroad station and village about it, 150. Water supply obtained from small streams; there are but few wells. Only a few houses could be used as quarters or storehouses. At the railroad station is a siding of 300 yards, one of 350 yards, and a small combination freight and passenger station.

Tunas de Zaza.—Barrio and village. The village is usually called Tunas and sometimes Zaza. It is on the south coast of the island, on the Caribbean Sea, 2 miles west of the mouth of the Río Zaza, about 20 miles east of Casilda (the port of the city of Trinidad), about 45 miles southeast of Cienfuegos and 25 miles southwest of Sancti Spiritus. The town consists mostly of frame houses and small frame stores. This is the southern terminus of the Tunas and Sancti Spiritus Railroad; single track; rolling stock, roadbed, and wharf in poor condition. Track often 2 feet under water in wet weather. The immediate location of Tunas is on a point of sand barely large enough for the houses, and the elevation is about 3 feet above high tide. It is often inundated by heavy rains and unusually high tides, and is entirely surrounded by water or marsh. There is said to be little illness, but mosquitoes are numerous in the wet season. The mainland is about 6 miles distant. Population, 500. There are no industries, and the people are mostly occupied in fishing, work connected with the railroad, and loading and unloading vessels. Contains five general stores. The village has an outlying settlement, 1 mile east, called Macano. It consists of one row of fishermen's houses facing the sea, and a tannery where about 30 men are employed. The population of Macano is about 250. The only road out of it is a small footbridge connecting it with Tunas. There is also a sitio called Zaza, which is situated about 6 miles northeast of Tunas.

Water supply: Rain water is caught in cisterns; capacity of all about 20,000 gallons. During dry season water is brought by railroad in tank cars from the Yayabo River. At the point where the water is obtained (5 miles north of Tunas) there is a windmill pumping from a well and the near-by streams. The water is of good quality and is stored in an elevated tank alongside railroad track and is taken to Tunas in tank cars as needed. The supply is ample for local needs. There are three of these tank cars and they correspond to the smaller size oil-tank cars seen in the States. Tanks contain about 5,000 gallons and water is sold to individuals.

Sewerage and lighting: No sewer system and no system of lighting has been installed.

Barracks: There is one excellent building suitable for almost any military purpose. It is the railroad station office, freight depot, and storehouse, and is about 100 yards long and 50 feet wide, with an unobstructed floor space. The building is of brick, with high walls, solidly built floors, and has a 12-foot covered platform extending along the entire east side; this platform is on a level with the inside floor and with floors of cars alongside. It has a ramp at southern end, so that animals can be easily loaded and unloaded. There is a corral extending along west side of building which has an iron watering trough large enough to water 10 or 15 horses at one time. Three hundred men could be put into the railroad station, 60 in the custom-house, and 60 in the storehouse (frame) on the wharf. The "Hotel Fenix" is situated opposite the point where the railroad pier leaves the land. It is an old, dirty frame building in a very poor state of repair, and is now used for tiendas. It appears to have originally been intended as a hotel, and could be put into shape for housing men or for offices and storerooms. Outside dimensions about 40 by 100 feet; one story.

There are no stables and no draft animals available.

There is a corral alongside station that would hold 100 or 150 animals. There is plenty of room during dry season for about 500 animals on the east side of the railroad, 1 mile north of village, but there is no water except what can be hauled from the mainland. There is good grazing between railroad and Zaza River. This stream is salty and so is all other water in vicinity.

Hospital: There are 2 or 3 two-story houses at street crossing, near cable station. One of them has a good circulation of air about it, and has screened upper balconies all around, making it a suitable place for a small hospital.

Storehouses: There are various small stores that could be used for commissary and quartermaster offices and storehouses. The most convenient location (other than large buildings already mentioned) would be opposite tracks on east side, but the ground is boggy at all seasons. There is a turntable between the two outside tracks. The pier has two tracks, but about 200 feet of east track has been destroyed by storms. This could be easily rebuilt. The tide is from 1½ to 2 feet, and the rail is about 2 feet above high water. The floor of the pier is the same height as the floors of the cars, but is partly smashed and nearly all of it is washed away. The small house on pier is about 30 by 40 feet. The water on west side of pier is deep enough at all times for vessels drawing 17 feet of water. The sleepers of the railroad track on the pier are covered with boards so that animals can be driven along, and there is a ramp on the west side leading up to platform at outer end of pier.

Offices: The telegraph office and post-office are situated at the middle point of street running north and south through center of village. The cable office is on the beach, opposite center of village.

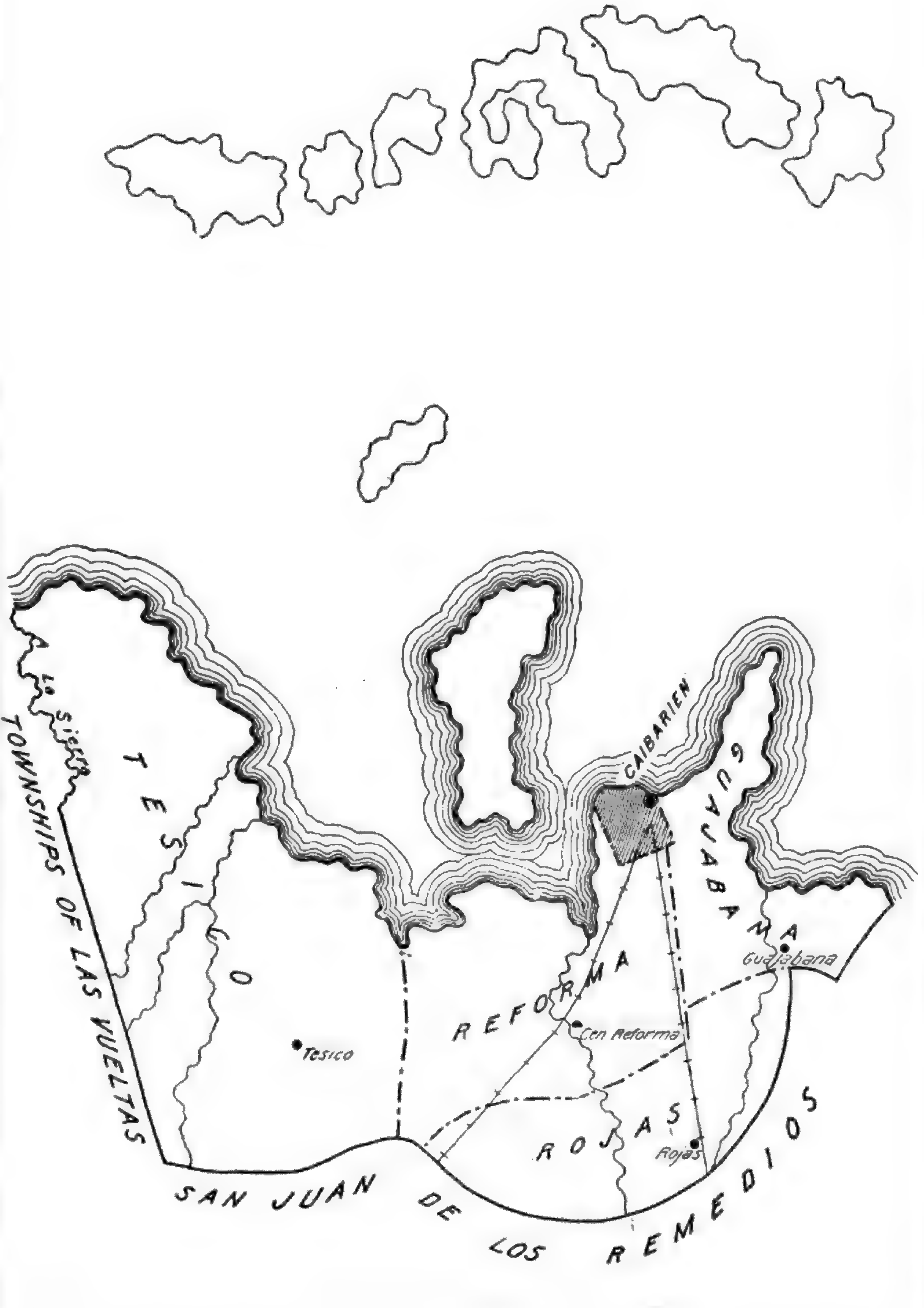
In wet or dry season a battalion could bivouac on the long platform at station, and the horses of a squadron could be kept in corral opposite. In dry season only, a camp for a regiment could be made on the large expanse of sand bars 1 mile north of the village.

At Zaza, 6 miles north of Tunas, there is a suitable camp site for a regiment of cavalry or infantry between track and bend of river and opposite the old depot and switch. At this place a spur runs one-third of a mile south from depot to 2 large abandoned warehouses on river bank. One of these buildings would shelter the horses of a squadron and the other afford shelter for men of the command. Both of these are brick buildings with good tile roofs, and are situated on river bank where small boats with supplies could unload directly into the buildings if a long gang plank were used.

There is another camp site in a pasture of good grass on opposite side of railroad. Both places could get water for animals from Arroyo Salado, 1 mile west of station.

Another suitable camp site for a regiment is situated 1 mile west of Zaza on north side of railroad track. Could be

CAIBARIEN TOWNSHIP



used in dry season only. It would get its water for drinking purposes, as would the others, from railroad tank 1 mile west of Zaza.

All three places have plenty of wood for fuel, and plenty of grazing for animals for a limited period.

These locations are given in connection with report on Tunas because of the lack of water, fuel, and grass at the latter place, and because if any considerable force were to land there the troops would be almost compelled, on account of very limited space, to move out of village as fast as landed. These three locations can be reached at all seasons by small boats from Tunas to the warehouses mentioned above; also by train and by marching up railroad. If the latter course is taken by mounted troops, boards are necessary to cover short bridges.

There are no defenses.

Roads: There are no roads leading out of village except the railroad and a pony trail along it, leading north to Zaza, 6 miles; impassable May to November. Village approachable by land along railroad only.

Best line of approach: This place can be approached in force only from the sea and from the north along railroad, across open and bare ground. An attack from the north would be hard to resist, and there could be but little defense against strong landing parties.

JUDICIAL DISTRICT OF SAN JUAN DE LOS REMEDIOS.

Townships:	Population.
Caibarién	10, 053
Camajuaní	14, 583
Placetas	16, 682
San Antonio de las Vueltas	16, 861
San Juan de los Remedios	21, 573
Yaguajay	13, 707

TOWNSHIP OF CAIBARIÉN (CAPITAL, CAIBARIÉN).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Caibarién	Primero	Urban		2,735
	Segundo	do		2,205
	Tercero	do		3,393
Guajábana	Guajábana or Sexto	Rural	4	435
	Reforma or Cuarto	do	2	562
Rojas	Rojas or Séptimo	do	.6	512
Tesico	Tesico or Quinto	do	3.8	211

Caibarién.—Town. Situated on the northern coast of Santa Clara Province, 31 miles by road from Santa Clara, slightly north of east. It is divided into Primero, Segundo, and Tercero barrios. Sugar warehouses are on the harbor front, and on the street in rear are offices and wholesale houses. In the vicinity of the plaza are the principal retail stores, cafés, clubs, and a large church. The remainder of the buildings are dwelling houses, mainly small one-story structures. Principal industries are sponge fishing, manufacture of cigars, exportation of sugar, tobacco, wax, honey, and native lumber, and the importation of merchandise.

Population, 8,333.

Water supply: Location of plant, 550 yards southeast of plaza. Water is pumped from spring into tank, and then flows by gravity into the supply pipe. Pumping station at spring; two pumps, combined capacity in 24 hours 139,200 gallons; owners claim from experiments made that spring can supply such an amount. Length of supply pipe, 2,740 yards; diameter of supply pipe, 2 inches. Amount of water furnished per day of twenty-four hours, 20,000 gallons. The tank is used as a reservoir, and is at the spring; capacity, 5,107 gallons.

No sewer system. Electric light plant, capacity of 1,000 lights; on west edge of town. Acetylene gas and oil are mostly used.

Buildings available for barracks: Seven large sugar storehouses built of brick, with tile roofs, floors 4 feet above the ground, well ventilated and situated on the water front of the town. Six of them have capacity for 400 men each, and one has capacity for 200 men. The buildings are in excellent condition and water is obtained from wells and cisterns in vicinity, several of them having large tanks of rain water. All of them with the exception of the one having capacity for 200 men are wholly or partially filled with sugar during the months of December, January, February, March, and April. The remainder of the year they are practically empty.

The above buildings could be used for commissary and quartermaster storehouses, and in case of necessity for stables. There is a large open space south of the warehouses, and north of them a wide street, where animals could be picketed.

There are two small stables in the south part of town, each with space for 10 horses.

Ice machine on west edge of town; capacity 6,000 pounds in twenty-four hours.

Transportation corral south of town on Caibarién-Remedios road. Open ground. Well at farmhouse near corral.

The private hospital of Doctor Cabrera, a two-story frame building in southwest part of town, has space for 50 beds; water obtained from well; lighted by acetylene. Building used as a Spanish club, stone, 100 by 75 feet, facing plaza, two-story, electric lighting, city water; would have room for 75 beds.

Quartermaster and commissary storehouses: Any of the buildings described as barracks could be used; railroad tracks either at the sides or through center of buildings. Unloading can be done directly from cars to the floors of buildings.

Railroad station is on northwest edge of town. Telegraph office on calle Independencia. Telephone office on calle Escóbar, in the building occupied by National Bank of Cuba. Post-office on calle Jemínez.

Camp sites: East and west of the Caibarién-Remedios road, at the south end of town, is a large tract of high, uncultivated land. Area sufficient for two battalions. Healthfulness of site is excellent. Water can be obtained from pumping station and wells of the houses in vicinity. Animals can also be watered from the river at the Reforma plantation, 2 miles south of the town. Fuel is abundant and obtained from woods in the vicinity of the town. Grass is abundant.

The town is surrounded on its land side by a circle of 8 blockhouses, the descriptions of which are as follows:

No. 1. East of town, 200 yards south of seashore; old brick blockhouse, 18 feet square, 20 feet high, corrugated iron roof; two tiers of fire for riflemen and has lookout; wall 2 feet thick. Has good command of country.

No. 2. East of town, 500 yards southwest of No. 1; same as No. 1, except that it is 25 feet high, has a tile roof, and has three tiers of fire.

No. 3. East of town, 500 yards southwest of No. 2; new wooden blockhouse, 12 feet square and protective walls 6 feet high. Lookout 15 feet above ground. Has one tier of fire for riflemen. Ditch 4 feet wide and 4 feet deep about building. Walls, gravel between planks, 18 inches thick (7 inches being wood); corrugated iron roof.

No. 4. South of town, 200 yards southwest of No. 3; old blockhouse, 12 feet square, 12 feet high; protective walls on three sides; two tiers of fire for riflemen. Protective walls one thickness of railroad rails for 6 feet above ground; remainder 6 inches of plank.

No. 5. South of town, 300 yards northwest of No. 4; wall 150 feet by 90 feet, built about barracks of rural guard; wall 18 inches thick, 6 feet high; for one-half the distance made of rubble; other half made of gravel, between planks; one tier of fire for riflemen. Ditch 6 feet wide and 6 feet deep in front of one-half of the wall.

No. 6. South of town, 200 yards southwest of No. 4; same as No. 2.

No. 7. West of town, 500 yards northwest of No. 6; unfinished new wooden blockhouse; was to be the same as No. 3. Walls on three sides completed; no roof.

No. 8. West of town, 600 yards northwest of No. 7, old brick blockhouse. Originally was same as No. 1. Now only the walls remain to the height of 7 feet; one tier of fire.

All but Nos. 4 and 8 are in good condition.

Railroads: Approximate length of sidings is 5,635 yards. Railroad station, brick, 150 feet by 120 feet, has unloading platform. One small wooden roundhouse 120 feet by 60 feet. On the south edge of the town is a roundhouse, corrugated iron, 120 feet by 36 feet, and a machine shop 120 feet by 54 feet, wood; both used for narrow-gauge railroad.

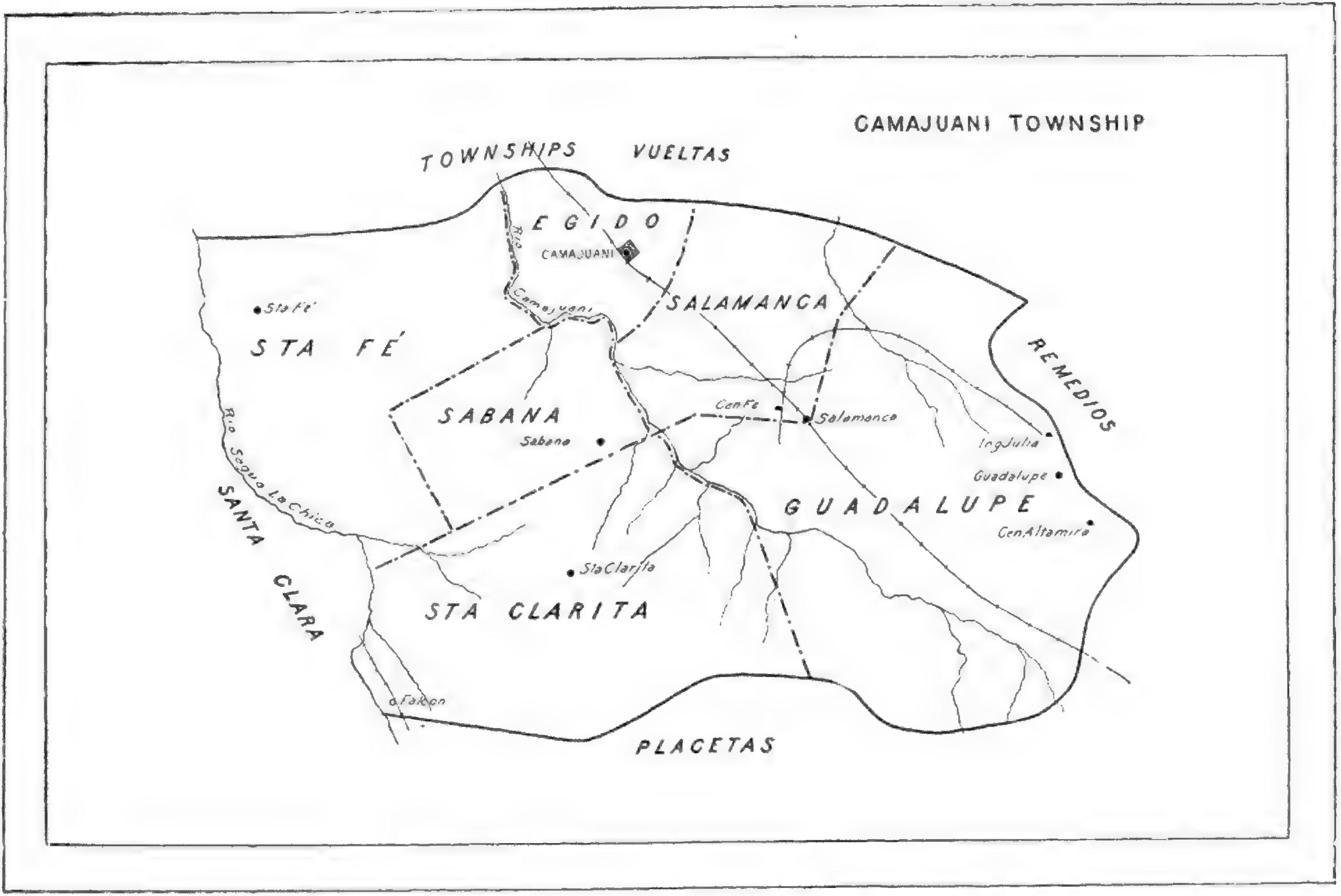
Roads leading out of town: One west to Remedios; one south to Rojas via Guajábana.

Best point of attack should place happen to be defended: East side of town, the easiest point being southeast corner.

Guajábana.—Barrio and sitio. The sitio bearing this name consists of one house and is 4 miles south of Caibarién.

Reforma.—Barrio. This barrio consists of the central Reforma and lands of the same.

Rojas.—Barrio and village. The village is 6 miles by road southwest of Caibarién, on Cuban Central Railroad (narrow gauge). Has 8 houses, 4 of which are constructed


CAMAJUANI TOWNSHIP
TOWNSHIPS
VUELTAS
REMEDIOS
PLACETAS
SANTA CLARA
EGIDO
CAMAJUANI
SALAMANCA
STA FÉ
Sta Fé
SABANA
Sabana
GUADALUPE
STA CLARITA
Sta Clarita
Cen Fé
Salamanca
Ing Julia
Guadalupe
Cen Altamira
Rio Camajuani
Rio Sagua La Chica
a Falcon

of wood. One wooden storehouse. Water obtained from wells near by; good and abundant. Telephone to Yaguajay and Reforma.

Tesico.—Barrio and village. The village is on a finca which contains about 1,300 acres of land, lies 2 miles north of Remedios, and extends north to the coast. There is a small frame schoolhouse. Property is divided into about 30 small holdings and there is that number of huts scattered through the finca. There was formerly a landing place on the coast 5 miles northwest of Caibarién.

TOWNSHIP OF CAMAJUANÍ (CAPITAL, CAMAJUANÍ).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital. Miles.	Population.
Camajuaní	Egido	Urban and rural.		6,020
Guadalupe	Guadalupe	Rural	10	2,079
Sabana	Sabana	do	4	1,403
Santa Clarita Falcón.	Santa Clarita	do	5.5	2,457
Santa Fé	Santa Fé	do	4.5	1,462
Salamanca	Salamanca	do	4	1,162

Camajuaní.—Town. Situated at the junction of the two branches of the Cuban Central Railroad leading to Sagua la Grande and Caibarién. It is in Egido barrio. A well built town with wide, partially improved streets. Principal industry is tobacco selecting; is also retail center for very large outlying rural district. Population, 5,316.

Water supply: Drinking water is obtained from open wells and rain water caught in tanks. For bathing and stock, water is from the Camajuaní River about one-fourth mile southwest of town. Drinking water is scarce during the dry season. Always plenty of water in Camajuaní River; a large stream. Rain water may be used without boiling. Well water unfit for drinking purposes on account of the proximity of privy vaults. Source of river water polluted and during grinding season it becomes unfit for use because sugar refuse is dumped into the river, at times becoming so bad as to kill the fish in the stream. During dry season, water obtained from springs, about 7 miles south of town; is sold from door to door.

Barracks: There are 2 buildings in Camajuaní that could be used as barracks in case of necessity. They are the tobacco houses of Solomon Brothers and Bernheim Brothers. Together they take up a whole block on the south end of calle Industria. They both have wells and large cisterns for rain water. Eight hundred men could easily have room for their cots, and with a little crowding 900 men could be accommodated. These are the only two buildings where large bodies of men could be housed.

There is an old Spanish barracks at the west end of town, but it is in a very filthy and dilapidated condition, and it would take considerable time and expense to put it in shape for use. In the rear of these barracks there is a large yard surrounded by a high, thick stone wall. The wall is about 12 feet high and from 1 to 1½ feet thick.

There are no large stables. No transportation corrals. Suitable open ground three-fourths of a mile west of town near river.

Three buildings are suitable for hospitals: First, on corner calle Leóncio and calle Agricultura; second, on corner San José and calle Industria; third, on corner of calle Industria and calle Fomento.

Railroad station and freight warehouse would be suitable for quartermaster or commissary storehouses. Large unloading platform and railroad tracks on both sides of buildings.

Location of important offices: Ayuntamiento, corner of calle Independencia and calle Macéo. Telegraph office, between calle Fomento and calle Leóncio on calle Industria. Railroad station, on calle Comercio between calle Agramonte and calle Céspedes.

Good camp site for a regiment three-fourths of a mile west of town near river. Site slightly sloping, well drained, and about 20 feet above river. Wood scarce. Water in river suitable for use if boiled and if sugar mills be prohibited from emptying waste products into the river.

Defenses: There are 5 blockhouses in the immediate vicinity of Camajuaní; one on each of the five roads leading from the town, and all of them just at the outskirts of the town. They are all small wooden affairs about 10 by 10 by 10 feet. Up to a height of about 4 feet from the ground they are double boarded inside and out, leaving a space of about 10 inches which is filled with stone, old bones, sod, etc. About 6 miles to the southwest, situated on Loma Cristi, is the blockhouse known as Fuerte Cristi. It is built of mortar, is very substantial and has a commanding view of the country for miles around.

Railroads: Cuban Central Railroad junction of Camajuaní-Caibarién and Sagua-Placetas lines. Fairly large railroad yard with good facilities for entraining; large unloading platform and storehouse. One small chute for unloading cattle and horses.

Roads and trails: There are five roads and trails out of Camajuaní. The Camajuaní-Las Vueltas road to the north: the Camajuaní-Taguayabón road to the east; the Camajuaní-Sabana road to the south; the Camajuaní-Santa Fé road to the west, and the Camajuaní-Bosque road to the northwest.

These so-called roads are mere trails and are absolutely unimproved. In the best weather it would be almost impossible to take an army wagon over them; in fact, the two-wheeled Cuban carts have difficulty on them. In the rainy season it is impossible to go over them except on foot or horseback, and then it is necessary to go in single file, keeping to the traveled path, as on each side is mud several feet deep.

There are no bridges or improvements of any kind. The rivers and streams are all easily forded, but the smaller streams, especially the arroyos, are liable to sudden rise.

In the dry season pack animals and two-wheeled carts would be suitable. In case of necessity animals in transit could be watered at Camajuaní. There is a large ramp in the railroad yards available for unloading animals. They could then be watered at the Camajuaní River, just beyond the northwest outskirts of the town.

The best line of approach for attack is from the north-northeast through the cane fields of the old Matilde plantation.

Guadalupe.—Barrio and village. Ingenio Julia and central Altamira are situated in the barrio. The village is 7½ miles southwest of Remedios and 10 miles by road southeast of Camajuaní. It consists of a small frame store and 7 thatched huts. Water is obtained from wells. A road leads from this point to Taguayabón and is suitable for native carts.

Sabana.—Barrio and sitio. The sitio is situated about 4 miles south of Camajuaní. It is a small place of about 6 houses. A little west of this place is a blockhouse, 20 feet high; can be seen from hill just south of Camajuaní. It is of cement, loopholed, 15 feet square; poor condition.

Santa Clarita.—Barrio and village. Barrio contains, besides the village bearing its name, the sitio Falcón. The village consists of 10 scattered houses and 2 stores, situated about 6 miles southeast of Camajuaní. Water obtained from wells. A road runs north to Camajuaní, one south to Baez and Guaracabulla, and one southwest to Falcón.

Falcón.—Sitio. A small station on the Cuba Company's line, about 14 miles southeast of Santa Clara, and 9 miles by road slightly east of south of Camajuaní. It consists of two or three houses, a water tank, and a large general store and warehouse. Population, 25. Water obtained from well and Río Chico.

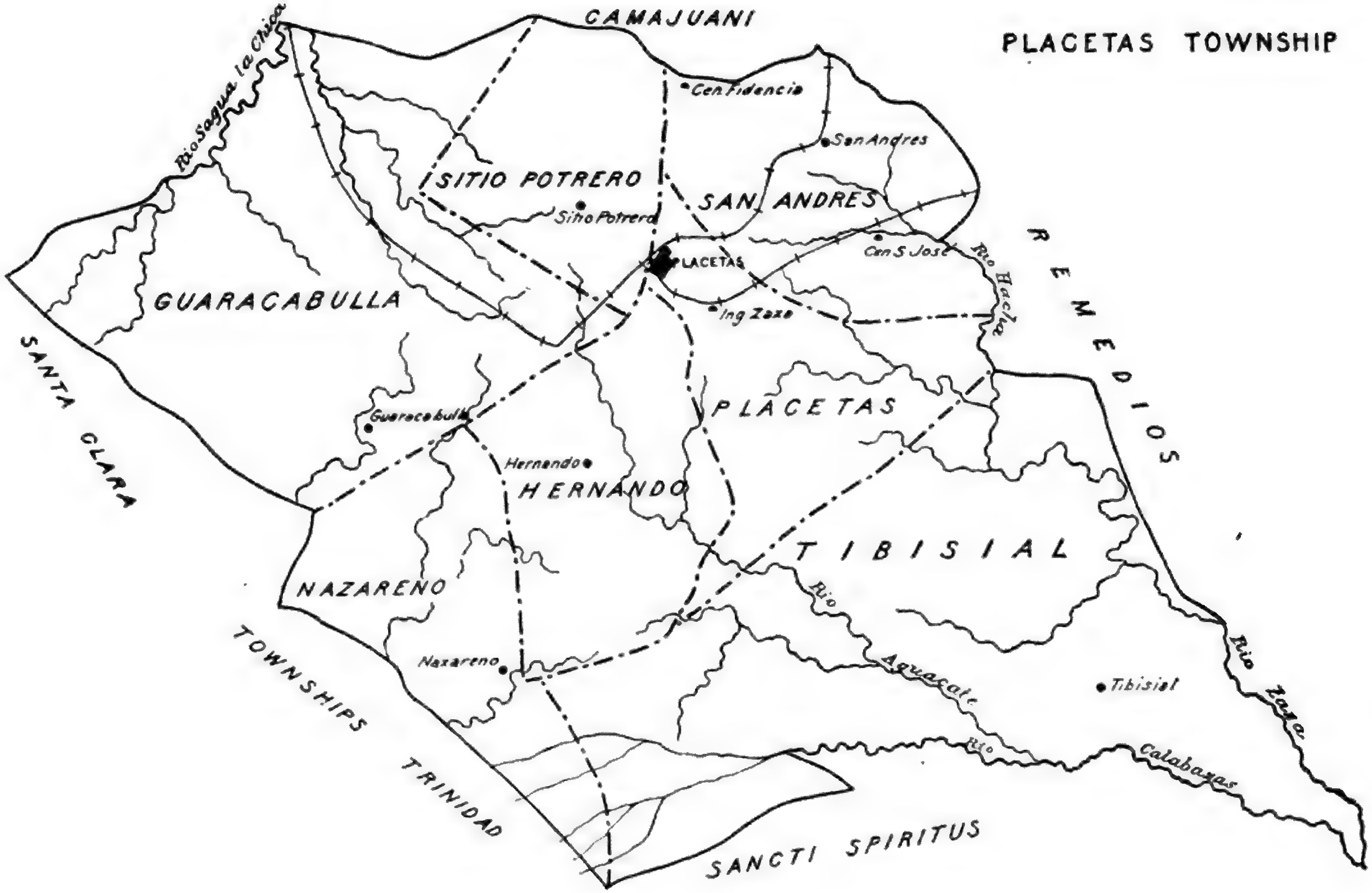
A warehouse, 46 by 80 feet, would accommodate two troops or companies. There is a large tract of fine, open, and level ground between the railroad track and Río Chico, suitable for corral or picket lines; stream 50 yards distant. There is a fine camp site for a regiment between the railroad track and Río Chico. Good camp site for any number of men on the north bank of stream.

The Cuba Company Railroad has a siding one-fourth of a mile long. One road leaves sitio north to Camajuaní, one northwest to Santa Clara, and one northeast to Santa Clarita. The ground to the southeast of the place is broken by long, low hills and affords best line of approach.

Santa Fé.—Barrio and village. Village is about 4½ miles west of Camajuaní. Consists of about 12 houses. Locality is a narrow valley of the Santa Fé Range, about 2 miles long.

Salamanca.—Barrio and sitio. The sitio is a small place of 4 houses, about 3½ miles southeast of Camajuaní. It is also a railroad station of the Cuba Central Railroad, and is a shipping point for the Fé sugar plantation, which is situated in the barrio. Population, about 20. Water is obtained from one 25-foot well; water good. It has a stone station and is a telegraph station, with phone to Camajuaní

PLACETAS TOWNSHIP



and Fé plantation. One road through place northwest and southeast from Taguayabón to Placetas. Best approach from the southeast.

TOWNSHIP OF PLACETAS (CAPITAL, PLACETAS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Placetas	Placetas	Urban and rural.	....	7,443
Guaracabulla	Guaracabulla	Rural	7	2,135
Hernando	Hernando	...do	4½	1,677
Nazareno	Nazareno	...do	10	1,241
San Andrés	San Andrés	...do	3½	1,754
Sitio Potrero	Sitio Potrero	...do	3½	1,055
Tibisial	Tibisial	...do	10	1,377

Placetas.—Barrio and town. Barrio contains ingenio Zaza. Town situated on Cuban Central Railroad, 40 miles east of Santa Clara. Population, 6,184. Lighted by acetylene gas.

Drinking water is obtained from wells and cisterns; supply plentiful but should be boiled. Stock is watered mostly from wells. There are small streams, however, one-half and 1 mile from town, and water for stock can be obtained in sufficient quantity for a large number of animals.

Barracks occupied by troops February, 1907, sufficient for two troops of cavalry or two companies of infantry. In case of emergency, barracks for three additional companies could be obtained 200 yards south of depot. Stables for one troop of cavalry built by United States forces. No corrals; plenty of open ground in vicinity of depot. No hospitals; a few private houses could be rented for purpose. No large buildings for quartermaster and commissary storehouses.

Post-office and telegraph office in center of town opposite the plaza. Railroad station northeast limits of town. Sidings at station; capacity, 20 cars. Good facilities for detraining and entraining; raised platform 5 yards long for loading animals.

Eight temporary blockhouses situated in the middle of streets all around the town. Blockhouses 10 by 16 feet, built of wood, filled in with dirt and gravel.

No good camp sites; all ground in vicinity open, but low and very muddy in the rainy season. No good roads in vicinity; mostly trails, which lead to all towns and villages in vicinity. Country open on all sides and town hard to defend. Best line of approach would be from northeast.

Guaracabulla.—Barrio and village. A village of about 50 houses on the Santa Clara-Rebarcadero-Zuazo-Placetas road, 28 miles from Santa Clara and 15 miles southeast of Camajuaní. Population about 200.

Water supply: Drinking water obtained from cisterns and wells. People who have no wells carry water in buckets from the Guaracabulla River. Water for washing and stock obtained from wells and river. Well water gets low in dry season. River also gets low, but it is said never to run dry. The well water and river water should be boiled before drinking. Surrounding the wells are the usual uncleanly conditions. There is a warehouse that would serve for barracks, built of wood, one-story, 50 by 70 feet, tin roof; capacity 30 men. There is no railroad station. Placetas, 6 miles distant, is the nearest station. Telegraph and post office in center of village. Telegraphic connection with Havana, Placetas, Baez, and all other points.

The old stone church has been loopholed for defense, but it is in bad condition and has evidently not been used for a long time. Has old rifle pits in front of it.

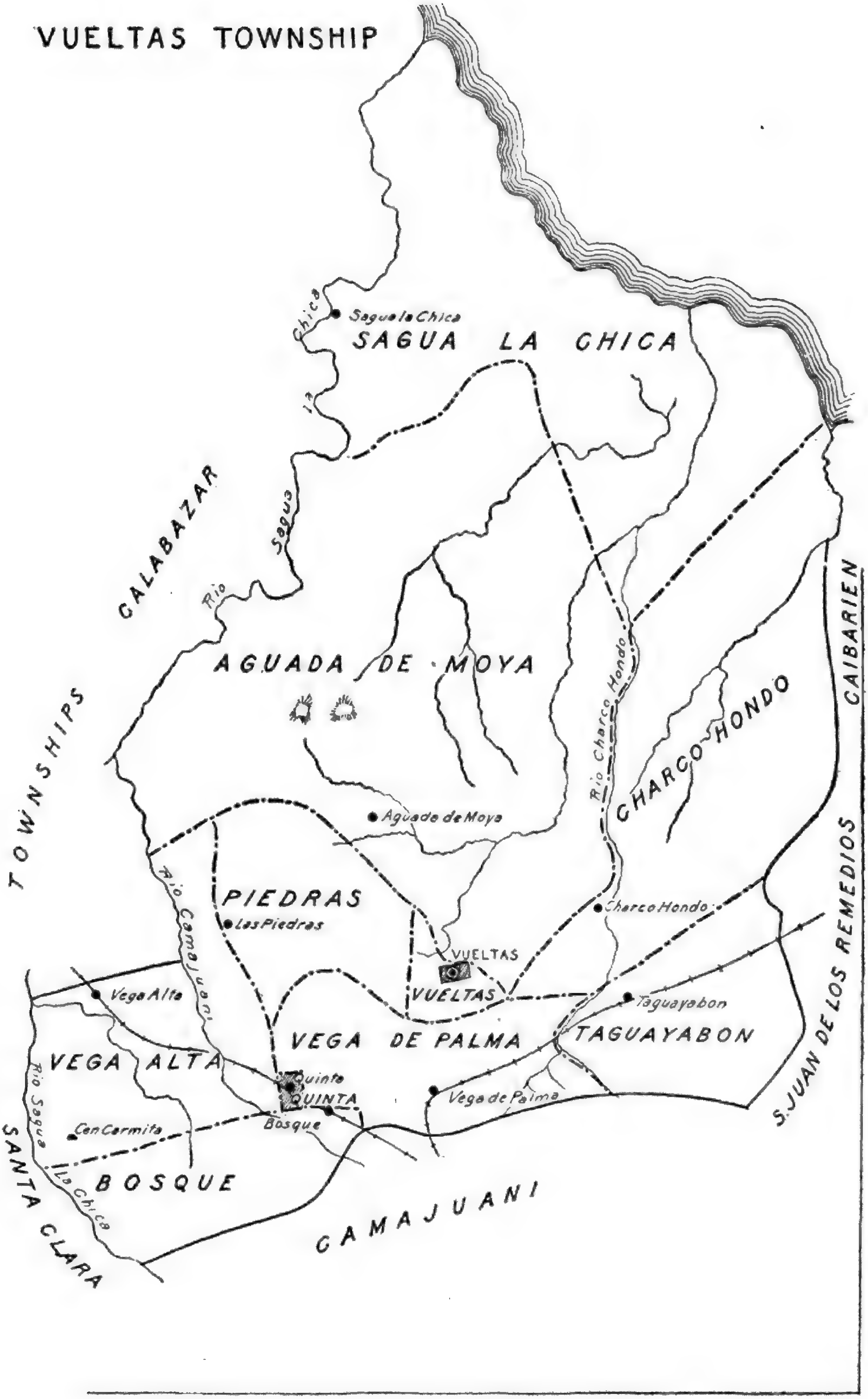
There is a good camp site for a squadron on the road to Santa Clarita, near the crossing of the Guaracabulla River. Roads out of village north to Camajuaní, northwest to Santa Clara via Rebarcardero, northeast to Placetas, and south to Baez. For attack, an approach from the west is about as good as any.

Hernando.—Barrio and sitio. A rural district. The sitio is 4¼ miles southwest of Placetas on the road to Sancti Spiritus. It consists of a small store in a wooden building with thatched roof. Water obtained from a well.

Nazareno.—Barrio and village. The village having the name is situated 10 miles southwest of Placetas on road to Sancti Spiritus. It consists of 2 small stores, a schoolhouse, and 4 frame houses. Water obtained from wells and considered good; supply limited.

San Andrés.—Barrio and village. Centrals Fidencia and San José y Carida are within the barrio. The village is on the Cuban Central Railroad, about 3½ miles north of Placetas.

VUELTAS TOWNSHIP



Population about 200. Water supply obtained from wells and small stream; quality good and quantity abundant. No buildings suitable for barracks. Plenty of good ground in vicinity suitable for camps. At the railroad station there is a siding 100 yards long and a small platform.

Sitio Potrero.—Barrio and sitio. Point bearing the name is a farm having a house thereon and is situated about 3½ miles by road southwest of Placetas.

Tibisial.—Barrio and sitio. The place bearing the name is a finca on the Placetas-Corojo-Tibisial road, 10 miles southeast of Placetas. It has a house and a store. Water is obtained from a well and is scarce. No water for animals near at hand. Nearest watering place is the Zaza River, 1½ miles distant.

TOWNSHIP OF VUELTAS (CAPITAL, VUELTAS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Vueltas	Vueltas	Urban and rural.		2,673
Aguada de Moya	Aguada de Moya	Rural	3¾	2,727
Bosque	Bosque	do	5	1,077
Charco Hondo	Charco Hondo	do	5	685
Piedras	Piedras	do	3¾	901
Quinta	Quinta	Urban	3¾	1,082
Sagua la Chica	Sagua la Chica	Rural	19	1,145
Taguayabón	Taguayabón	do	4	1,890
Vega Alta	Vega Alta	do	15	2,560
Vega de Palma	Vega de Palma	do	1¾	2,121

Vueltas.—Barrio and town. The town is the capital of a large country district. Small town, with unimproved streets. Principal industries are tobacco raising and retailing to country district. Population, 1,129. Water supply obtained from wells and rain water. Large tobacco warehouse suitable for barracks for 2 companies; good condition; ventilation good; well water. No large stables or corrals. Cuban Club could be used as hospital; room for about 40 beds; plenty of air, light, etc.; well and rain water. Town is about 3 miles from nearest railroad station, which is Vega de Palma. Has post-office and telegraph office.

Aguada de Moya.—Barrio and scattered settlement. Settlement is about 3 miles north of Vueltas; consists of a few scattered thatched houses on small tobacco farms. A small arroyo furnishes water. The place is rather swampy and unfavorable for camp sites. Roads in vicinity are very poor; suitable for no kind of wheeled transportation.

Bosque.—Barrio and scattered settlement. The settlement is scattered along the Cuban Central Railroad and is in a sugar-cane and tobacco district. It contains about 20 houses. Two are frame with tile roof, one mampostería with tile roof, and the balance are native huts. The water supply is obtained from wells.

Charco Hondo.—Barrio and sitio. The sitio bearing this name is about 5 miles northeast of Vueltas and halfway between Vueltas and Remedios. It consists of 4 thatched houses, a large barn or stable, and a corral. Is at the Río Charco crossing of the Remedios and Vueltas road. Water obtained from river and is of good quality. There is a good camp site for a battalion near at hand; water, wood, and forage in quantity. The ford of the river is good. Roads unsuitable for wheeled transportation.

Piedras.—Barrio and sitio. The sitio is a group of 6 or 7 thatched huts and a small store situated 3¾ miles northwest of Vueltas.

Quinta.—Barrio and village. The village is on Cuban Central Railroad, 3¾ miles west of Vueltas, and is 3 miles north of Camajuaní. The locality is considered very healthy. Population, about 250.

Water supply: Drinking and washing water obtained from 5 wells around the village. It is said to be sufficient for the use of the village, but any large number of troops would probably have to use the Camajuaní River, 1½ miles distant. The quality of the well water is good, although as a precaution it should be boiled.

Oil and acetylene used for lighting.

Buildings suitable for barracks: The rural guard barracks is a wooden house; capacity, 15 men. Schoolhouse; wood, tile roof, 20 by 30 feet; capacity, 10 men. Two-story tobacco warehouse; wood, tile roof, 120 by 40 feet; upper story not floored; capacity, 100 men. Tobacco warehouse; wood, thatched roof, 60 by 39 feet; capacity, 50 men. Brick and plaster church, 50 by 30 feet; capacity, 30 men. Four frame warehouses; tin and tile roofs; 30 by 70 feet; capacity, 50 men each. Church could be used as hospital.

Brick and plaster dwelling and storehouse, 80 by 39 feet, could be utilized for quartermaster and commissary storehouse.

Important offices: Post-office, railroad station, and telegraph office. Telegraph line follows the railroad; poles carry two wires. Railroad station is of brick, 50 by 30 feet, two stories; has stone platform 100 feet long, 6 feet wide, 1½ feet above tracks. Freight platform, opposite, is of wood, 20 by 10 feet, and 4 feet above tracks. No ramps. Two sidetracks 200 yards long; central point opposite station.

No camp site for command of any size close at hand. If large command were to occupy the village for any length of time, it would soon exhaust the water supply, and water would have to be hauled from the Camajuaní River, distant 1½ miles.

Defenses: Old Spanish blockhouse, two tiers of fire, interior diameter 10 feet; in bad condition.

Roads out of village: One north to Calabazar and one south to Camajuaní.

Best line of approach for attack is from the northwest.

Sagua la Chica.—Barrio and village. The village is on the east bank of the Sagua la Chica River, 1 mile from and on the opposite side of the river from El Santo. It is 19 miles by road northeast of Vueltas. The principal industry is the manufacture of roofing tiles. Population, about 400.

In the village are some small stores, a schoolhouse, and about 15 small thatched houses. To the north, on the banks of the river, are four tile factories. By removing the drying frames from the drying sheds of the tile factories about 500 men could be sheltered.

Water from the Sagua la Chica River and rain water are used; should be boiled. Just north of the village is a tract of land which might be used as a camp site for a brigade; wood and water abundant, and grazing good. Vessels of 3½ feet draft can load at two of the tile factories; no wharves. Roads leave village as follows: Main road from Vueltas to Playa Juan Francisco, road east to Playa Carapacha, and trail southeast to Remedios through Sitio Nuevo. Best line of approach for attack is from the east.

Taguayabón.—Barrio and village. Taguayabón station is on the Cuban Central Railroad between Camajuaní and Caibarién, and is 4 miles southeast of Vueltas. One frame and mortar station; 1 fair-sized warehouse; 2 small stores; 4 frame houses, tile roofs; 4 or 5 native huts; railroad water tank; telegraph station and post-office. Population, about 200. Water supply obtained from wells. Taguayabón is three-fourths of a mile south of Taguayabón station. It is in the tobacco and cane region. Consists of 3 frame buildings. 3 native huts, and several tobacco-drying houses. Water supply obtained from wells. The Camajuaní-Taguayabón-Remedios road is passable by army wagons in dry weather. All others, trails; passable by native carts in dry weather.

Vega Alta.—Barrio and village. Central Carmita is in the barrio. The village is 6 miles southeast of Encrucijada on the Cuban Central Railroad, and is 15 miles by road northwest of Vueltas. Population, about 300.

Drinking water obtained from large well in northeast part of village. Supply ample for ordinary purposes at all times, but water should be boiled. Water for bathing and stock from Río Sagua la Chica, a large stream near by. Ample in quantity. Could be used for drinking after it has been boiled. No sewer system. Lighted by a few street lamps.

Buildings: There is a stone chapel capable of accommodating two companies. Four buildings on the east side of village are capable of accommodating three companies. The railroad station, frame, will hold one company. Stone storehouse (railroad) will hold one company. These buildings are in good repair. Water supply is meager, but there is plenty in the river, a few hundred yards away.

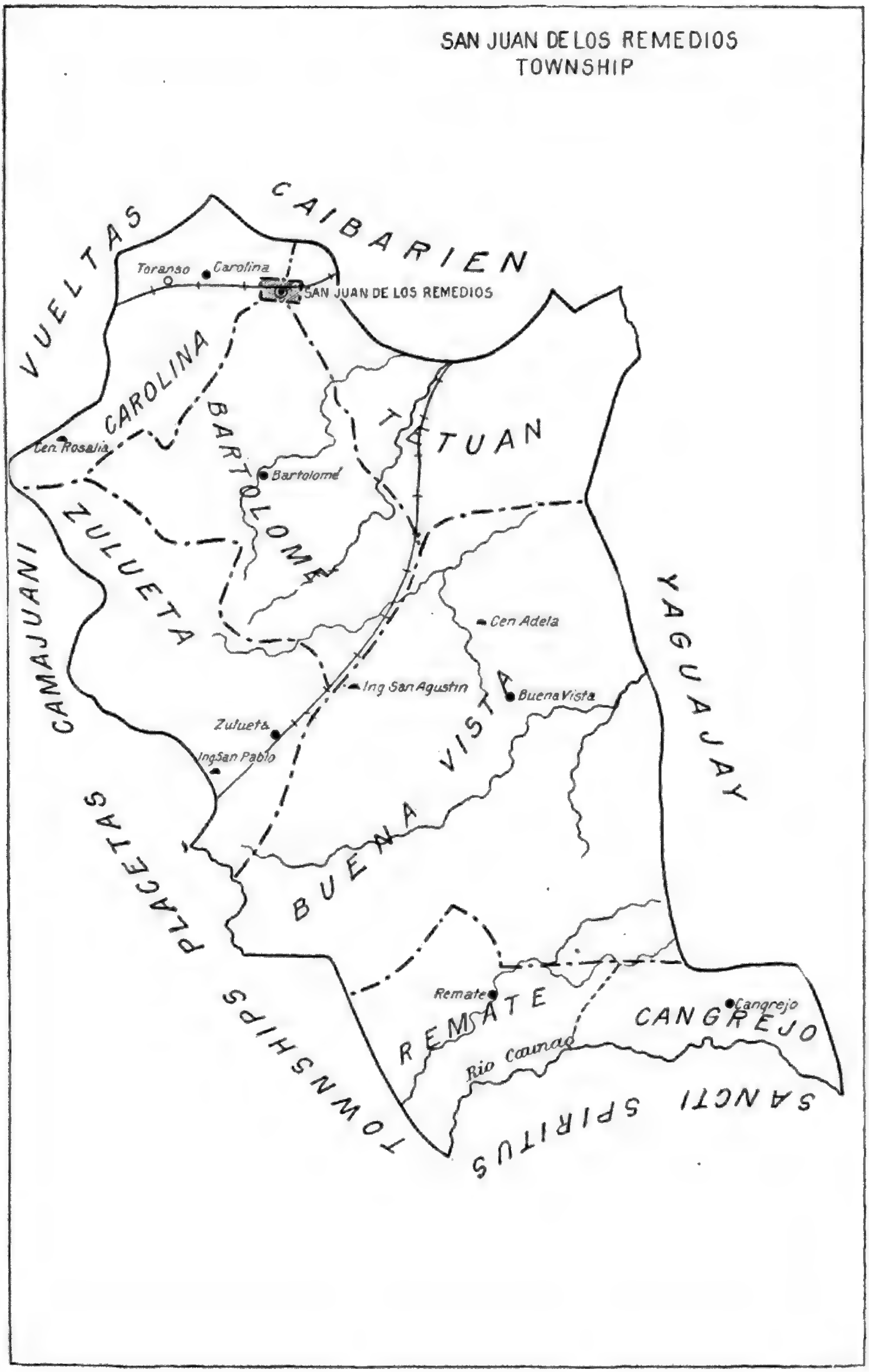
No stables and no corrals, but there is open ground all around and water can be obtained from the river.

The stone chapel would be suitable for a hospital; would accommodate in the neighborhood of 120 men.

Railroad station and storehouse would be suitable for quartermaster and commissary storehouses. There is an unloading platform at station. The storehouse is very close to station.

Railroad station and post-office are in the center of the village; telegraph and telephone offices are at railroad station.

SAN JUAN DE LOS REMEDIOS TOWNSHIP



Good camp site west of village, near river; large enough for regiment or more. Good grazing; wood could be procured in neighborhood.

There are two stone blockhouses; one in center of village and the other west of village.

No railroad siding; entrain or detrain at station, where there is a platform.

Roads lead out of village northwest to Santo, southeast to Camajuaní, and southwest to Santa Clara.

Best lines of approach for attack are from the north and south.

Vega de Palma.—Barrio and village. The village is on Cuban Central Railroad between Camajuaní and Caibarién, and is the railroad station for Vueltas, which lies 1⅛ miles to the north. Is in a tobacco and sugar region. Population, 150. Water supply obtained from wells. Consists of a frame station with tile roof, a water tank, a store, a large masonry house with tile roof, a large frame barn with corrugated-iron roof, 4 small frame houses with tile roofs, and several native huts. In the vicinity are several tobacco drying houses. Has a post-office, and a telephone to Vueltas. The road to Vueltas is fair. At the west edge of village is a wooden railroad bridge which is 25 feet long and 15 feet high.

TOWNSHIP OF SAN JUAN DE LOS REMEDIOS (CAPITAL, REMEDIOS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
San Juan de los Remedios.	Primero, Ciudad	Urban		1,570
	Segundo, Ciudad	do		2,708
	Tercero, Ciudad	do		1,460
	Cuarto, Ciudad	do		1,250
Bartolomé	Bartolomé	Rural	3¼	497
Buenavista	Buenavista	do	10	5,651
Cangrejo	Cangrejo	do	25.5	1,252
Carolina	Carolina	do	1.5	1,400
Toranso.				
Remate	Remate	do	17	1,997
	Tetuán	do	5.5	469
Zulueta	Zulueta	do	8	3,319

Remedios.—Town. This town, one of the oldest in Santa Clara Province, is situated in the northeast part of the province, 5½ miles west and south of the port of Caibarién, and connected with it by railroad and one good macadamized wagon road. It is divided into four wards or urban barrios. In the vicinity of the plaza, which is the center of the town, are two churches and buildings occupied by the Cuban Club, Colonia Española, a Recreo de Artisanos and Centro de Recreo (mulatto), one municipal building (occupied by police headquarters, district and correctional courts), a hotel, cafés, and principal retail stores. The remainder of the buildings are mostly residences; small one-story structures. The principal industries are the manufacture of cigars, and sale of farming implements and household supplies to the surrounding country. Population, 6,988. Water supply is obtained from wells and cisterns. No sewer system. Acetylene gas and oil used for lighting.

Barracks: No. 1. West of town on road to cemetery. Wooden building, long and narrow, corrugated iron roof; used by Spanish troops; municipal property; capacity, 50 men; poor condition. No. 2. West of town, near cemetery. Large one-story brick building, tile roof; built about a court; used as Spanish army hospital; government property; capacity, 200 men; poor condition. No. 3. West of town, near cemetery. Large one-story brick building, tile roof; built about a court; used as Spanish barracks; government property; capacity, 300 men; poor condition. No. 4. North of plaza—Pedro Diaz and Guera streets. Small one-story brick house; small court; used as Spanish barracks; government property; capacity, 50 men; poor condition. No. 5. West of town, on road to cemetery. Large one-story brick building, tile roof; large court; used as jail; municipal property; capacity, 200 men; good condition. No. 6. West of plaza, Santa Clara street. Two-story brick building with tile roof; small court; used as assembly rooms of band and firemen; municipal property; capacity, 100 men; in poor condition. No. 7. South of town, Antonio Maceo street. Large one-story brick building with tile roof; large court; 100 men; good condition. All buildings, except Nos. 1 and 2, have wells. Water is abundant, but should be boiled before drinking.

There is a large stable on the east edge of town on Remedios-Caibarién road. Shelter and water for 100 animals. A plot of ground, about 8,000 square yards, near stables mentioned would make a good transportation corral. The Provincial Hospital, on Antonio Maceo street, is a large, one-story brick building with tile roof and large court; well water used; room for 125 beds. For quartermaster and commissary storehouses the following could be used: The building described as No. 1 under barracks, and the freight house near railroad station; wooden building, 65 by 30 feet. Railroad station on north edge of town. Post-office on General Carillo street. Telegraph office at No. 2 León Albernes street (near municipal building). Telephone central in municipal building near plaza. No ice machine. A quarter of a mile southwest of town is area of land sufficient for the camp of a regiment. Water supply can be obtained from two wells on land; fuel and grass abundant.

Blockhouses: No. 1. East of town, on Caibarién road. New wooden building with corrugated iron roof and lookout; 18 feet square, 12 feet high, with 18-inch wall of wood and gravel, and one tier of fire. No. 2. South of town. Unfinished; same plan as No. 1; walls completed to height of 5 feet. No. 3. In street. Built on corner of building, Pedro Diaz and Guevara streets; is new and about circular; 12 feet in diameter; 8 feet high, with 2-foot stone wall and one tier of fire. No. 4. Built on southeast corner of jail; same as No. 3. No. 5. South of town; same as No. 2. Condition of all very good.

Cuban Central Railroad: Station on north edge of town. Brick building, 70 feet long by 20 feet wide. One frame freight building, 65 by 30 feet. Unloading platform. Railroad siding, 600 yards long, in front of railroad station. Roads out of town: East, one to Caibarién and one to Rojas. West, one which leads to Camajuaní and branches to Charco Hondo. North, one to Baracoa and one to Guayabo. South, one to Bartolomé, one to Guadalupe, and one to Viñas. Should place happen to be defended, the north side of town should be attacked.

Bartolomé.—Barrio and village. The village is 3¾ miles south of Remedios and consists of a frame store, two frame houses, and a thatched house. Water is obtained from river near by and is good and abundant.

Buena Vista.—Barrio and village. Barrio contains central Adela and ingenio San Agustín. The village is situated about 10 miles southeast of San Juan de los Remedios. Population about 400. Water supply is obtained from wells and two springs, from which the Adela sugar plantation also secures water; the quantity is abundant and the quality very good.

Buildings suitable for barracks: One-story frame building with tile roof; occupied by the Cuban Club; capacity, 50 men. One-story frame building with tile roof; owner, Gonzalez; capacity, 50 men. One-story brick building, tile roof, north of village, occupied by rural guard; owned by Adela plantation; capacity, 50 men. Water to be obtained from wells or spring mentioned above.

Camp sites: North of rural guard barracks and across the road; good site; capacity, two companies. West of rural guard barracks and across the road; site good; capacity, one regiment. Water obtained from wells and spring near barracks; fuel abundant; grazing excellent.

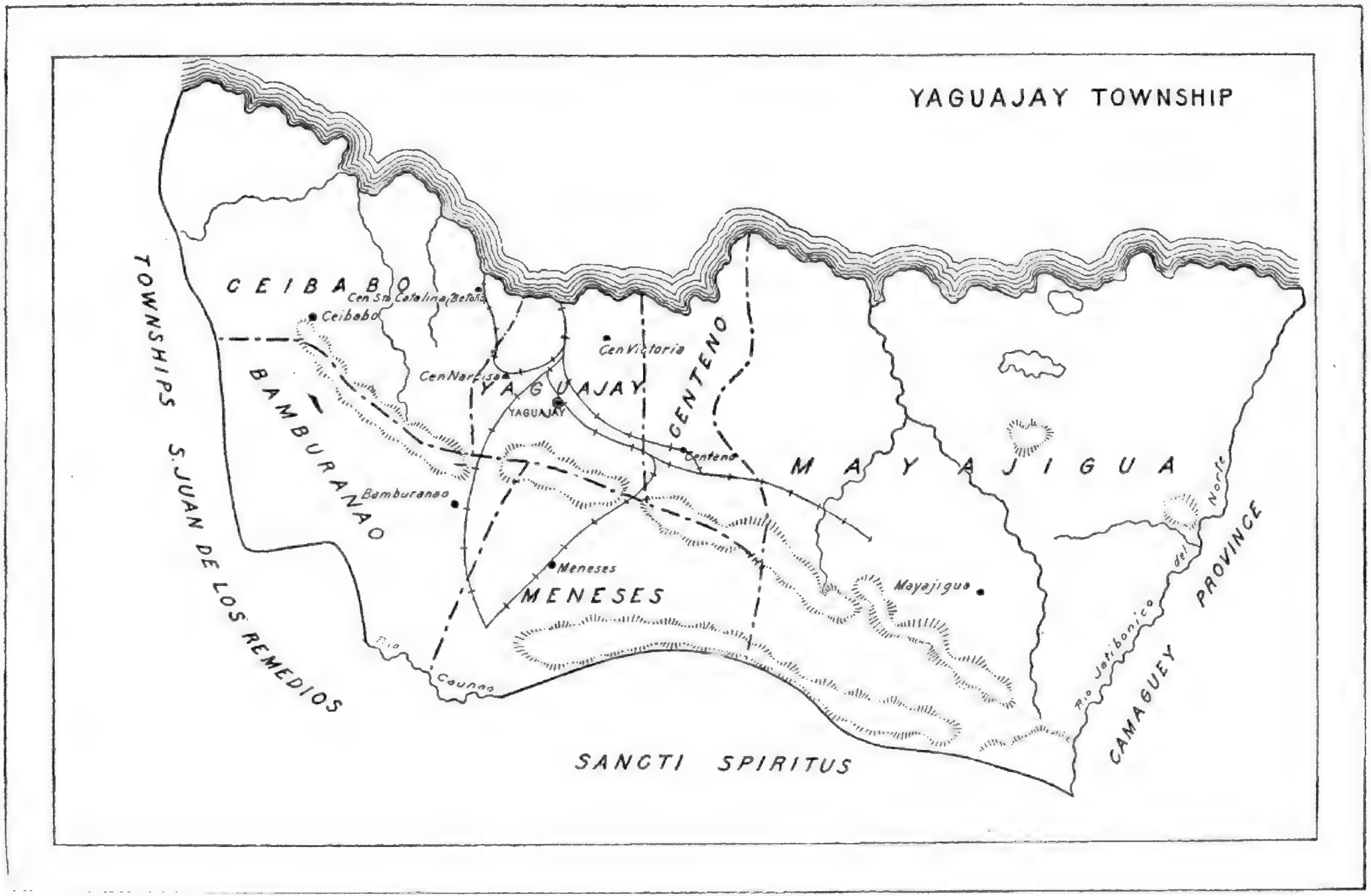
Defenses: Blockhouse south of village; brick and stone; no roof; 20 feet square, 20 feet high, 18-inch wall; has two tiers of fire; condition good. Stone blockhouse west of village; 10 feet square, 10 feet high, 18-inch wall; no roof; has one tier of fire; condition bad. North and south walls of rural guard barracks, north of village; rounded and loopholed for one tier of fire; 2 feet thick; condition good.

Cangrejo.—Barrio and village. The village is a small place containing 3 stores and 20 thatched houses, and is 25½ miles southwest of Remedios, by road.

Carolina.—Barrio and sitio. The sitio is 1½ miles west of Remedios on Cuban Central Railroad and consists of 4 thatched houses. Water obtained from one well. There is another Carolina about 1½ miles north of the Carolina described above. It consists of a few houses scattered along the road running northwest from Remedios to Charco Hondo. The village of Toranso and central Rosalia are also in Carolina barrio.

Toranso.—Village. Situated 3 miles west of Remedios on the Cuban Central Railroad and consists of 25 or 30 houses.

Remate.—Barrio and village. The village is 8 miles south of Buena Vista and 17 miles southeast of Remedios. It consists of 12 houses and a store. Population, 150.


YAGUAJAY TOWNSHIP
CEIBABO
Cen Sta Catalina (Betoña)
Ceibabo
Cen Narciso
YAGUAJAY
YAGUAJAY
Cen Victoria
CENTENO
Centeno
MAYAJIGUA
Mayajigua
BAMBURANAO
Bamburanao
MENESES
Meneses
Rio Caunao
Rio Jatibonico del Norte
TOWNSHIPS S. JUAN DE LOS REMEDIOS
SANCTI SPIRITUS
CAMAGUEY PROVINCE

Tetuán.—Barrio. A rural district lying southeast of Remedios.

Zulueta.—Barrio and town. Ingenio San Pablo is within the barrio. Town is about 8 miles southwest of San Juan de los Remedios. Population, 1,955.

The water supply is obtained from wells, there being one at nearly every house; the quantity is abundant and the quality good, but it should be boiled before using. Large windmill at railroad station pumps water into a tank. About 1½ miles southwest of town small stream is crossed by trail. Plenty of water for animals.

Buildings for barracks: Frame building with tile roof; in south part of town; government building, and used as barracks for rural guard; capacity, 50 men. Frame building with tile roof; in west part of town; Liceo (Cuban Club); capacity, 50 men. Frame building with tile roof; in south part of town; capacity, about 30 men.

Camp site: Southeast of and across the road from rural guard barracks; ground for one battalion. Locality appears healthful; water obtained from rural guard quarters; fuel abundant; grazing excellent.

The Cuban Central, narrow-gauge branch, leaves the town to the northeast for Caibarién. There are three side tracks about 100 yards long. Stock can be unloaded north of station.

Two trails lead south from town; one to San Manuel and the other a little to the east of south into the hilly country. A horse trail leads northwest.

North of town is a low ridge or hill about 150 feet high.

TOWNSHIP OF YAGUAJAY (CAPITAL, YAGUAJAY).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Yaguajay	Yaguajay	Rural		4,810
Bamburanao	Bamburanao	do	3. 5	1,769
Ceibabo	Ceibabo	do	8	1,132
Centeno	Centeno	do	3	597
Mayajigua	Mayajigua	do	13. 5	2,693
Meneses	Meneses	do	5. 5	2,706

Yaguajay.—Barrio and town. Centrals Victoria and Narcisa are within the barrio. The town is about 29 miles from Remedios. Population, 3,110.

The water supply is obtained from wells, from a spring on the south edge of town and from one about 2 miles from town. There is also a creek running through the town from which water is taken. All water should be boiled before using.

The following buildings would be suitable for the shelter of troops: Municipal building, used as a town hall, west side of town on plaza; 100 men. Municipal schoolhouse, west side of town on Panchito Gómez street; 50 men. Quarters occupied by rural guard (private property), south side of town on Yara street; 50 men and 18 horses.

There is a hospital on the west side of town. It is a frame building and holds 18 beds.

On west side of town toward the hospital is a good camp site for a battalion.

New wooden blockhouses 15 feet high, 15 feet square, walls 18 inches of wood and gravel, and having corrugated iron roofs, are situated as follows: One west, two south, one east, and three north of town. In the southwest part of town is an old slave barracks; in very poor condition.

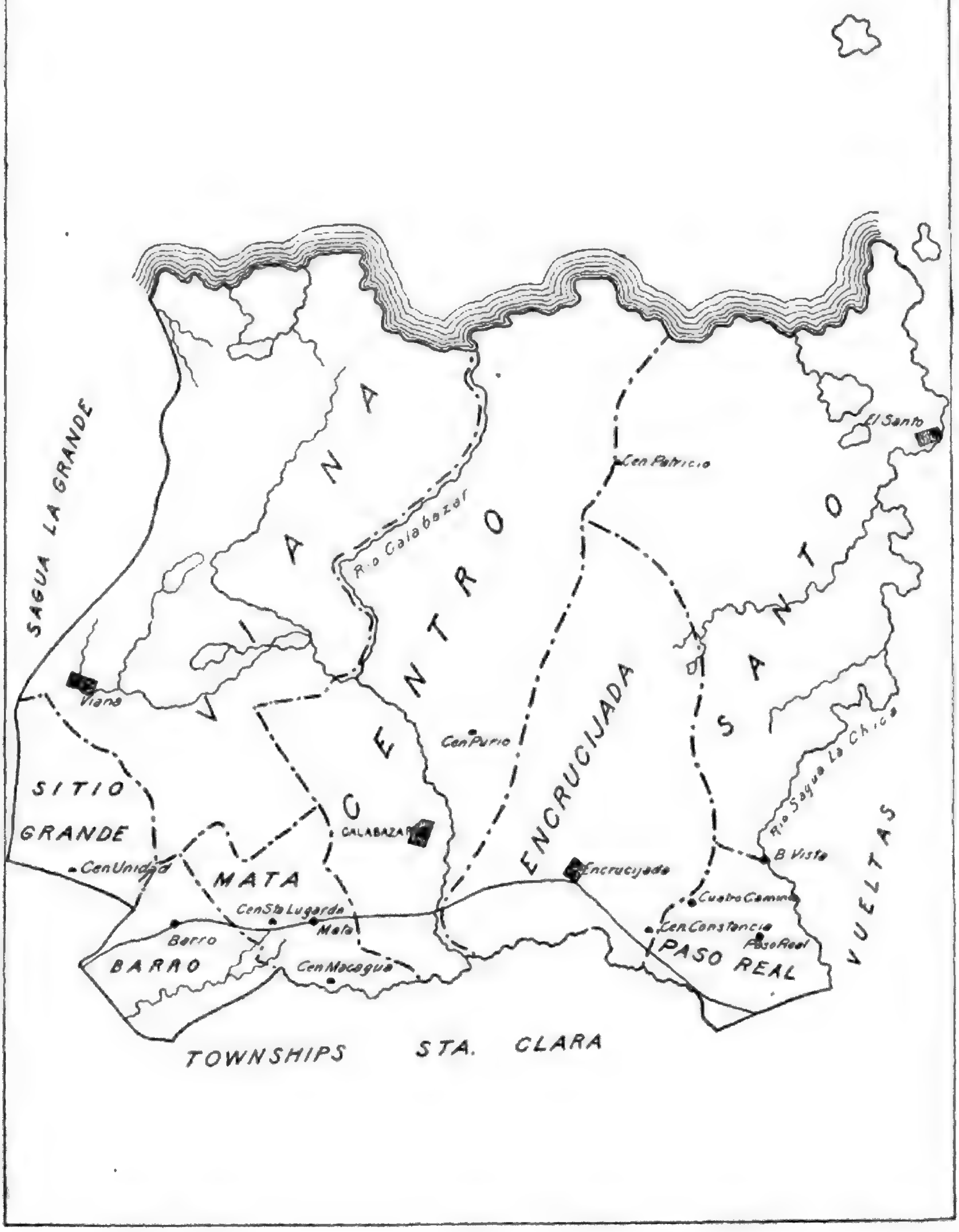
Bamburanao.—Barrio and village. The village is 3½ miles southwest of Yaguajay and about 1½ miles from Meneses. It consists of a store and [illegible] houses, and water is obtained from a small stream.

Ceibabo.—Barrio and sitio. The sitio is 8 miles northwest of Yaguajay, on the Narcisa Railroad. A branch of the Santa Rosa River passes through the place and the water obtained therefrom is good. There are 5 houses; one a frame building and the others huts. Barrio contains central Santa Catalina (Betoño) (Carbo).

Centeno.—Barrio and sitio. The sitio is 3 miles southeast of Yaguajay and consists of 4 frame houses and 5 huts.

Mayajigua.—Barrio and village. The village is 13½ miles southeast of Yaguajay and 3 miles southeast of terminus of Narcisa Railroad. Population, 500. The water supply is obtained from two rivers near by, the Aguacate and Guata. It is abundant and of good quality. The village consists of several stores and a number of houses, all of which are frame

CALABAZAR TOWNSHIP



buildings. Rural guard barracks shelters 50 men. Two companies could camp on the plaza in front of the church. Roads from village to Jatibonico, Rosa María, and Manacas. One mile southeast of the village there is a building which was used by the Spaniards as a hospital. It is built over a spring believed to have medicinal properties and would hold 30 beds.

Meneses.—Barrio and village. The village is 5½ miles south of Yaguajay, on a high plateau. Population, about 100. Water supply obtained from a large spring near the village; it is of good quality and abundant. All buildings are frame structures. There are 4 stores and the rural guard barracks. Shelter for 25 men. Two companies could camp in the south part of village near the barracks. Victoria Railroad (narrow gauge) passes near by. Roads from village to Itabo, Jobosí, Bamburanao, and Manacal.

JUDICIAL DISTRICT OF SANTA CLARA.

Township:	Population.
Calabazar	16,979
Esperanza	18,183
Ranchuelo	12,537
Santa Clara	46,640

TOWNSHIP OF CALABAZAR (CAPITAL, CALABAZAR).

Town, village, or sitio.	Barrio.	Rural or urban.*	Distance from capital.	Population.
			Miles.	
Calabazar	Centro	Rural and urban.		4,125
Barro	Barro	Rural	7½	491
Encrucijada	Encrucijada	Urban and rural.	3½	3,317
Mata	Mata	Rural	3½	2,267
Paso Real Cuatro Caminos. Buena Vista.	Paso Real	do	9	1,095
El Santo	Santo	Urban and rural.	19	2,386
	Sitio Grande	Rural	14	833
Viana	Viana	do	10	2,465

Calabazar.—Town. Situated 3 miles northeast of Encrucijada and 17 miles slightly east of north of Santa Clara. It is in Centro barrio, which also contains central Purio. It is a country town and has no important industries. Population, 1,496.

Water is obtained from Calabazar Creek, which runs through the center of the town. Supply is abundant. No sewer system. Lighted by lamps; no electricity.

There are a number of buildings that would serve as barracks. Total capacity, about two battalions. Their sanitary condition is apparently fair. Modern water-closets are not used. No important stables. Hotel Estrella and the Unión Club would serve as hospitals and would accommodate about 200 men. Stone church would accommodate about 60 or 70 more. The railroad station, wagon shop, stone church, and ayuntamiento would serve as quartermaster and commissary storehouses. The Hotel Estrella or ayuntamiento building would serve well as a headquarters' building. No good camp sites near by; wood and grazing are scarce. Stone blockhouse, 15 by 15 by 24 feet, on west side of railroad near south entrance of town. Standard gauge branch of the Cuban Central Railroad runs to town. There is a siding 300 yards long. Roads lead out of town to Encrucijada, southeast; Sagua, northwest; Mata, southeast; and Santa Clara, southwest. The best line of approach for attack would be from the north and east.

Barro.—Barrio and village. The barrio is a section of country about 3 miles square, lying southwest of Calabazar. Besides the village it contains 3 stores and several sugar colonias.

The village consists of a store, two tile kilns, a public school, and several houses, and is about 8 miles northwest of Calabazar. Water obtained from wells. There are roads leaving the village northwest to Sitio Grande, Esperanza, Sagua la Grande, and Cifuentes; southeast to Mata; northeast to Calabazar; and north to Viana.

Encrucijada.—Barrio and town. In the barrio is situated the central Constancia. The town is about 25 miles northeast of Santa Clara and about 3 miles southeast of Calabazar. It is on the east side of the Cuban Central Railroad and extends mainly northeast and southwest. It is a country town of several general stores, three hotels, and several cafés. There are no important industries. The town is regular. There are only a few short improved roads and they are in poor condition. The others are unimproved dirt roads, but have been worked somewhat. There are no important buildings; all are low affairs. The church is built of stone and would accommodate a company. The railroad station and storehouse are built of brick.

Population, 1,801.

Drinking water obtained from a few wells situated throughout the town; ample supply for purpose; Americans should drink it only after it has been boiled; distributed by carts and buckets from door to door. Water for bathing and stock obtained from the Río La Palma, a small creek near by; ample in quantity. No sewer system. Lighted by street lamps.

Few buildings suitable for barracks. No stables. There is suitable open ground for a corral just southeast of town and the creek is near by. The stone church and schoolhouse would serve as hospitals. The railroad storehouse, station, and several buildings would serve as commissary and quartermaster's storehouses. Railroad station is at the west end of town. The post-office is near the railroad station. Telegraph and telephone stations at the railroad depot.

No very good camp sites near at hand. Between 2 and 3 miles southeast, at central Constancia, there is an excellent camp site on the Tuinucú River. Grazing fair; wood not plentiful.

There are 3 semi-blockhouses on the east and southeast side of town, a blockhouse 15 by 15 by 20 feet on the west side near railroad, and a blockhouse 15 by 15 by 24 feet on north side.

The Cuban Central Railroad is on the west side of town. Branch runs from near depot through north part of town to Labrador and central Patricio. Four sidings run out from depot along this branch. There is an unloading platform 40 by 12 feet between these tracks. There is also a platform at the station.

Roads lead out of town northwest to Calabazar, central Purio and colonia La Palma; southwest to ingenio Dos Hermanas; southeast to central Constancia, Vega Alta, and Camajuaní. A trail, impassable for wagons or carts, runs along the railroad to Mata.

The best line of approach is from the west and southwest. At present there is a standing trench along the line of semiblockhouses east of the town.

Mata.—Barrio and village. The barrio also contains the centrals Macagua and Santa Lutgarda (de López). The village is on the Cuban Central Railroad, about 3 miles slightly south of west of Calabazar. It is a small place and consists of a few houses scattered along both sides of a single street or road; a few stores, a schoolhouse, and post-office. The usual rural industries are followed. Population, about 800.

Water is obtained from four wells; quality good; quantity sufficient for village. The principal buildings in village are: The railroad station, north side of track, capacity 50 men; frame building; repair and sanitary condition good. Stone residence south of railroad near station; capacity 100 men; repair and sanitary condition good. These buildings are near each other.

It is a poor camping place, lacking wood, water, and suitable ground. Siding on north side of track, 300 yards long. Water tank, south side of track at east end of switch. Station is between main line and switch; has unloading platform. Roads leave village east to Camajuaní; south to Santa Clara; north and west to Sagua la Grande. North side of village hardest to defend.

Paso Real.—Barrio and sitio. The sitio bearing the name consists of a store at fork of roads. There are also two other stores in this barrio, namely, Cuatro Caminos and Buena Vista.

Santo.—Barrio and village. Central Patricio is in this barrio. The village is situated on the left bank of the Río Sagua la Chica, 19 miles by road northeast of Calabazar; about 4 miles from the sea by cart road, and about 6 miles by the river. It is near the north coast of Cuba between the towns of Sagua la Grande and Caibarién. It has no seaport properly speaking, but a place called Juan Francisco, northeast of Santo and south of the mouth of the river, has been used as a landing place for boats drawing as much as 9 feet of water. The river is navigable as far as Santo for boats drawing 6 feet of water. There appears to be no tide at the village. The principal industry is the manufacture of brick and tile. The largest brickyard is "Tejar San Felin," situated immediately across the river from the village.

Population, about 400.

Water is obtained from wells, rain-water tanks, and the river. Four windmills pump the supply from open wells. In the dry season the river water is brackish and that from other sources scarce.

At the Tejar San Felin brickyard are two large sheds capable of sheltering the men and horses of a squadron of cavalry or two battalions of infantry in case of a very temporary occupancy. These buildings and another, three or four hundred yards farther east, which is probably also capable of sheltering a battalion or more, are all substantial and are covered with good tile roofs.

A detachment of the rural guard occupies a solid little building near the river which is convenient to both ends of the village. Near it is a small stone church about 25 by 100 feet which is the only other solidly constructed building.

The rural guard quarters has stalls for a dozen horses, also a small corral.

About 300 yards east of the brickyard sheds, and on the same side of the river (right), is an airy, two-story frame house, with a veranda around the upper story, which could be converted into a hospital with a capacity for 12 or 15 beds.

Another two-story frame building at the west entrance to the village, and used as a café and hotel, would make a good headquarters or quartermaster's office.

There is no telegraph or telephone communication.

The principal means of transportation in use, other than small boats, are bull carts and pack ponies. There should be available at all times as many as 50 bull carts.

On the south side of the river between the village and the woods one-half mile south of it are camp sites sufficient for a brigade of cavalry; wood, water, and grass (under fence) right at hand. There are also numerous camp sites on the north side of the river (left bank), the side along which the main road to the village leads, but they are not so conveniently situated with reference to wood and water as are the ones in the fields on the south side.

The village has no means of defense against a serious attack. A small besieged garrison could in such a case take temporary refuge in the brickyard to the south of the village and hold out for a considerable time. There are two small blockhouses at the west and east ends of the place covering the open fields to the south only. There is another blockhouse near the outer edge of the scattered shacks at the southwest end of the village; surrounded by open fields.

A narrow-gauge railroad, the eastern end of which is about one-half mile north of the village, runs to Encrucijada, about 18 miles distant, via central Patricio. It also runs to Ceiba wharf on the sea. This line is the property of the central Patricio, situated about 6 miles west of Santo and is used exclusively as a sugar-cane road. The gauge of the road is 30 inches and the cars used are large enough to transport horses and mules, and are fairly well suited for the purpose though they have no covers. Ceiba wharf is 100 feet long with 11½ feet of water.

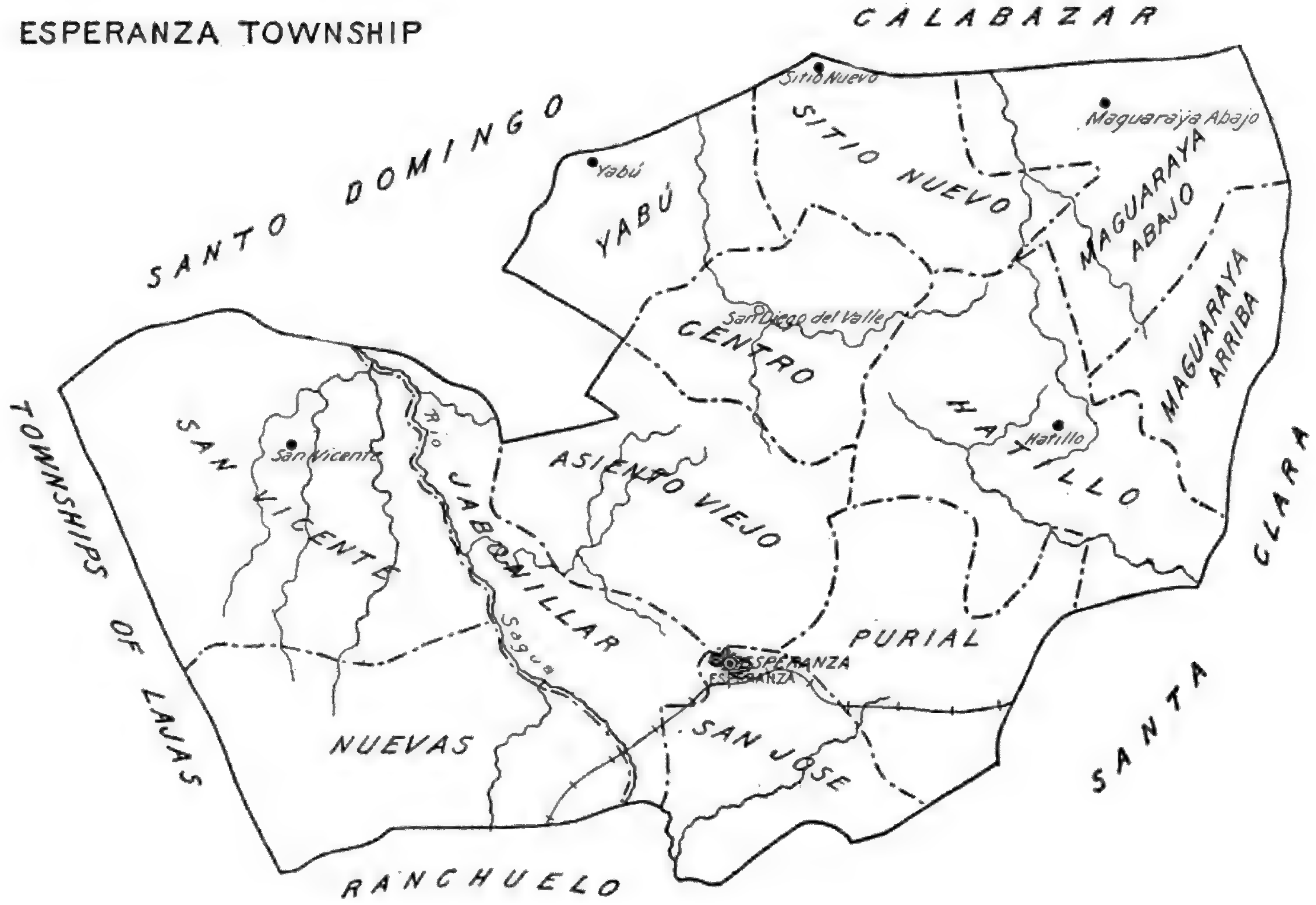
At the Tejar San Felin brickyard is a narrow-gauge tramway, 30-inch gauge, with 16 flat cars having platforms about 6 by 10 feet, suitable for handling the baggage of companies. One branch of this track extends to the water's edge; convenient for loading and unloading from boats.

A cart road which is good in dry season leads southwest from the village, following a general course along the west (left) bank of the Río Sagua la Chica, and connecting with the following points on the Cuban Central Railroad: Vega Alta, 15½ miles; central Constancia, 16 miles, and Encrucijada, 16½ miles.

Due south of the village, about one-fourth of a mile from the brickyard already described, is a ford with water 3½ feet deep. The river bottom is fairly firm; approaches are good, and the current is about 2 miles an hour when the river is low.

The village could most easily be attacked from the northeast from the general direction of the shacks of Santo and La Chica, or from the pasture on the west and northwest. If entirely by surprise, a short dash from the woods on the south side of the river, one-fourth mile from the brickyard, would be the quickest way to get possession of the village, as it is commanded by the brickyard.

ESPERANZA TOWNSHIP



Sitio Grande.—Barrio. A rural district west of Calabazar. Central Unidad is situated in this barrio.

Viana.—Barrio and village. The village is 10 miles northwest of Calabazar on the road to Sagua la Grande, and on the Resulta narrow-gauge railroad. It consists of about 25 houses, mostly frame with tile roofs. On outskirts of village are a few small palm huts. Population about 200. Water is obtained from wells and from numerous small creeks. Has a church partly in ruins and a brick blockhouse in bad condition. Post-office and telephone connection with Resulta and Sagua la Grande.

TOWNSHIP OF ESPERANZA (CAPITAL, ESPERANZA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Esperanza	Esperanza	Urban		2,754
	Asiento Viejo	Rural	2.5	1,861
San Diego del Valle	Centro	do	6.3	1,872
Hatillo	Hatillo	do	9.5	1,053
	Jabonillar	do	3.75	1,410
Maguaraya Abajo	Maguaraya Abajo	do	12	797
	Maguaraya Arriba	do	10	707
	Nuevas	do	6	1,855
	Purial	do	3.75	1,382
	San José	do	3	1,454
San Vicente	San Vicente	do	8.5	1,814
Sitio Nuevo	Sitio Nuevo	do	12.5	563
Yabú	Yabú	do	11	661

Esperanza.—Barrio and town. The town is about 9 miles northeast of Ranchuelo. It is small, but has many good houses and several large stores.

Principal industry: Cane and tobacco raising. Population, 2,754. Water supply obtained from wells. No sewer system and no modern lighting system.

Small rural guard barracks could accommodate about 25 men; has small inclosure for about 25 horses and shed for 12 horses; situated on calle de las Carreras, between calle Angel and calle Santa Margarita. Water obtained from large well.

No transportation corral, but a suitable part of open lot opposite rural guard barracks on calle Angel, between calle Real and calle de las Carreras, will give room for picket line of one troop or 8 wagons and teams.

Freight house at railroad would accommodate 25 men, or could be used as commissary and quartermaster storehouse. There is also a stone sugar warehouse situated about 500 yards north of railroad. Both houses cover about 1,200 square feet.

Mayor's office in building on southwest corner of plaza, corner of calle Angel and calle Real. On the ground floor is the telegraph station and on the upper floor is the post-office.

No hospital in town, but there are many large residences which would be suitable. One new brick building, corner calle Angel and calle Ramírez, would accommodate about 30 beds.

A small blockhouse, one story, brick, at northwest corner of town. Roads out of town: North to Jicotea; east to Santa Clara; south to Ranchuelo; and west to San Vicente. The west side of town would be the easiest to attack.

Asiento Viejo.—Barrio. A large section of country. No settlement or point bearing the name.

Centro.—Barrio. A section of country the center of which is about 6 miles north of Esperanza. Tobacco and cattle raising are the principal industries. Country rolling and open, with light underbrush. Contains the village of San Diego del Valle. River Yabú crosses barrio from southeast to northwest. It is a small stream with steep banks in many places; is from 8 to 12 feet wide, and probably fordable at all seasons.

San Diego del Valle.—Village. Village is situated 7½ miles north of Esperanza. Chief industries are cattle and tobacco. Population, about 300. Water supply obtained from wells and from Yabú River, which borders north edge of village. River supply poor; wells good; water plentiful.

No large building in village. Small frame church, dwellings, and stores could be used for barracks and hospitals; would accommodate temporarily 500 men. No stables and no corrals.

No railroad to the village; nearest railroad station is Jicotea, 5 miles southwest. Post-office and telephone from Jicotea in small store in center of village.

Good camp site for regiment 2 miles southeast of village. Good grazing; water fairly good; little wood. Roads lead to Sitio Nuevo, Cifuentes, Hatillo and Santa Clara, Jicotea, Santo Domingo, and Esperanza. North side of village most difficult to defend.

Hatillo.—Barrio and sitio. The sitio consists of a frame dwelling, a thatched shed, and a few thatched huts, and is situated 9½ miles by road northeast of Esperanza. At this point a road runs northwest to Sitio Nuevo, one northeast to Mata, and one southeast to Santa Clara.

Jabonillar.—Barrio. A large section of country. No settlement or point bearing the name.

Maguaraya Abajo.—Barrio and sitio. The barrio is a large section of country northeast of Esperanza. The sitio is 16½ miles by road (12 miles in direct line) from Esperanza. It consists of a store and two or three houses.

Maguaraya Arriba.—Barrio. A large section of country. No settlement or point bearing the name.

Nuevas.—Barrio. A rural district lying southwest of Esperanza.

Purial.—Barrio. A large section of country. No settlement or point bearing the name.

San José.—Barrio. A large section of country. No settlement or point bearing the name.

San Vicente.—Barrio and sitio. The sitio is 8 miles northwest of Esperanza, on road to Santo Domingo, and consists of three thatched huts. Spaniards had a small garrison at this place.

Sitio Nuevo.—Barrio and sitio. Barrio is a section of country lying north of Esperanza. The sitio is at a crossroads 13 miles from Esperanza on road to Cifuentes. It consists of several scattered houses, one of which is built of brick with tile roof. Near the brick house is a well with good water. Roads to Santa Clara, Cifuentes, San Diego, Yabú, and Rodrigo.

Yabú.—Barrio and sitio. The barrio is a section of country northwest of Esperanza. The sitio is situated at a crossroads 12 miles from Esperanza, and consists of a frame house with tile roof and a few scattered huts. There is a store in the frame house. Roads lead to Santo Domingo, Cifuentes, Rodrigo, and San Diego.

TOWNSHIP OF RANCHUELO (CAPITAL, RANCHUELO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Ranchuelo	Primero	Urban		1,492
	Segundo	do		1,367
	Aguas Bonitas	Rural	11$\frac{7}{8}$	1,006
Bernia	Bernia	do	8$\frac{1}{2}$	1,148
San Juan de los Yeras	Centro	do	5	2,514
Guayo	Guayo	do	4	1,265
Potrerillo	Potrerillo	do	9	1,113
	Poza de la China	do	1$\frac{7}{8}$	1,265
	Sitio Viejo	do	2$\frac{3}{16}$	1,367

Ranchuelo.—Town. Situated in the central part of the province of Santa Clara, about 25 miles northeast by east of Cienfuegos and about 13 miles southwest by west of Santa Clara, on the Cuban Central Railroad from Cienfuegos to Santa Clara. Small town in level country. Streets in poor condition. It is divided into two barrios, Primero and Segundo. Principal industries are sugar-cane raising and grinding, tobacco growing, cattle raising, and a little farming. Very healthful. Has a population of 2,859.

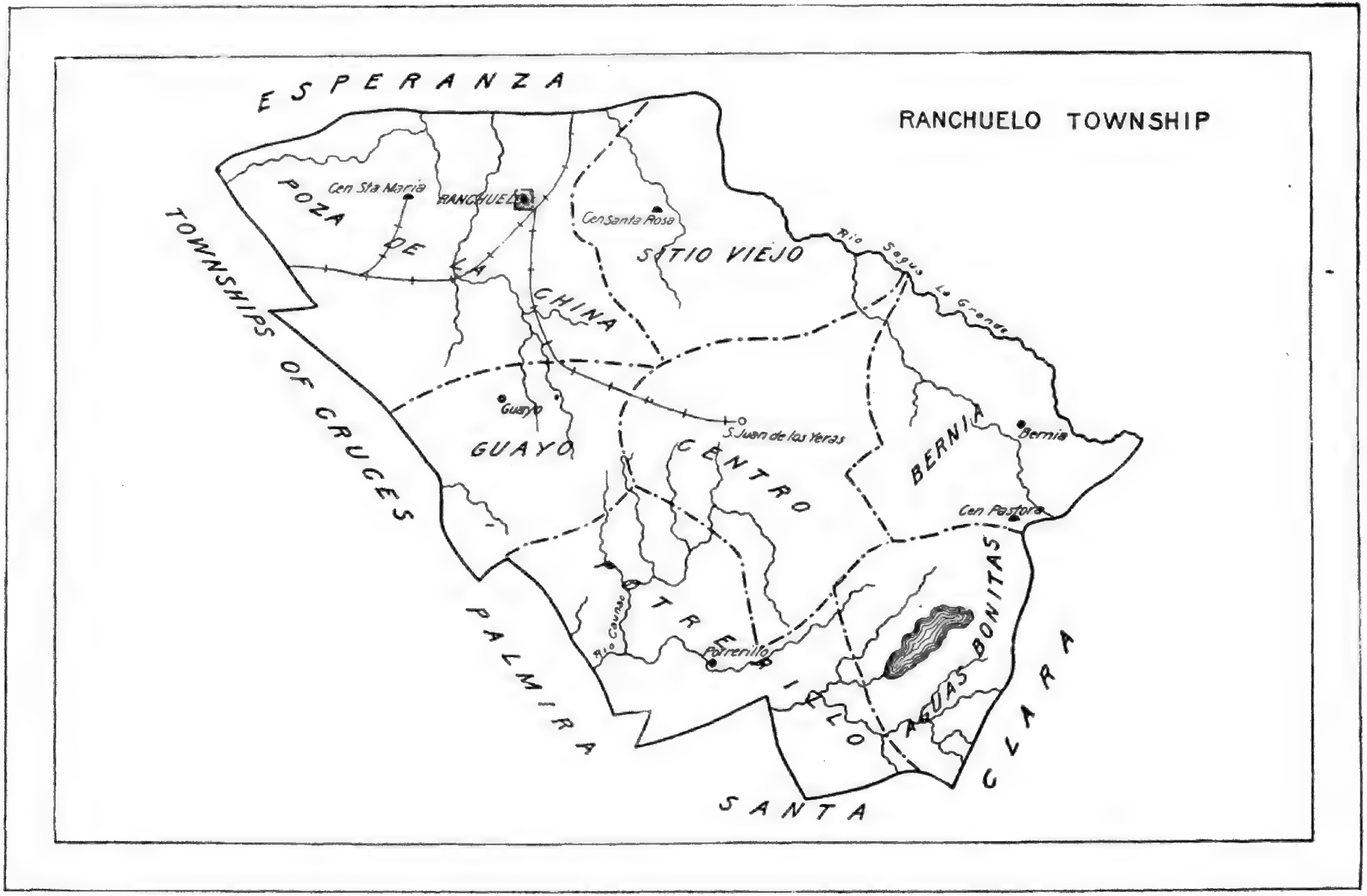
Water supply obtained from wells at each house and two public wells. Abundant and of good quality, but hard, containing a great quantity of magnesia.

No sewer system. One open ditch enters town at southwest corner and leaves on east side.

One small building, rural guard quarters, would hold about 40 men. A large warehouse on calle San Juan, at present (1907) occupied by United States troops, would accommodate 2 troops. A warehouse south of railroad on calle Solís, at present used for stable for 1 troop, would accommodate 1 troop. There are also 3 schoolhouses, which would shelter about 40 men each, and the alcaldía, with room for about 60 men. All, except stable, in good repair.

Electric-light plant (one small dynamo) situated opposite to and south of railroad station.

No transportation corral, but a piece of ground behind stables, between calles Solís, Pedro, and San Valentín, could be used for quartermaster transportation. Space at corral for about 24 army wagons and teams. Good well on grounds



RANCHUELO TOWNSHIP

and river at central Santa Rosa, distant about three-fourths of a mile.

No hospital, but one screened room in alcaldía for yellow-fever suspects. The schoolhouses could be used as hospitals, and each one would hold about 30 beds. The United States Army hospital is situated (February, 1907) on calle San Valentín in private house rented for the purpose; capacity, about 12 beds.

The buildings used as quarters and stables, and another large storehouse south of railroad, would make good quartermaster or commissary storehouses. Railroad track runs close to buildings. Station of Cuban Central Railroad opposite calle Santa Rosa. At the railroad station is a platform to unload stock or supplies, about 15 by 30 feet. There is also a coal platform, 20 by 60 feet; platform level with floor of cars.

Telegraph and telephone offices in railroad station. Telephone line to stations along railroad line, to Palmira, San Juan, and central Santa Rosa. Lines owned by railroad company.

No ice machine in town, but ice is shipped in daily from Cienfuegos.

Good camp sites northwest of the town; good grass and water, but very little wood. Room for two brigades or more.

No defenses, but cemetery one-half mile west of town and railroad embankments, cuts, and sunken roads on the west side would be very good defensive places.

Opposite railroad depot at electric-light plant, the bank is level with floor of cars and with short loading ramps about 6 feet long, six cars at a time could be loaded. Freight house could be used as commissary or quartermaster storehouse for small command. Roads out of town north and northwest to Esperanza and Santa Clara; east to Santa Clara; south to San Juan; west to Cruces and Ciego Montero.

Best line of approach for attack is from the north or south.

Aguas Bonitas.—Barrio. A large section of country. No settlement or point bearing the name.

Bernia.—Barrio and village. Central Pastora is in the barrio. The village is about 5 miles east of San Juan and

8½ miles by road southeast of Ranchuelo. It consists of about 25 thatched houses and one building which serves as a dwelling house, store, and dance hall. Ruins of an old Spanish blockhouse, 200 yards to the east. Water supply obtained from wells and Sagua River about 600 yards to the north. Good camp site south of crossroads for one regiment. Roads lead north to Santa Clara, east to finca Latorre, and south and west to Pastora.

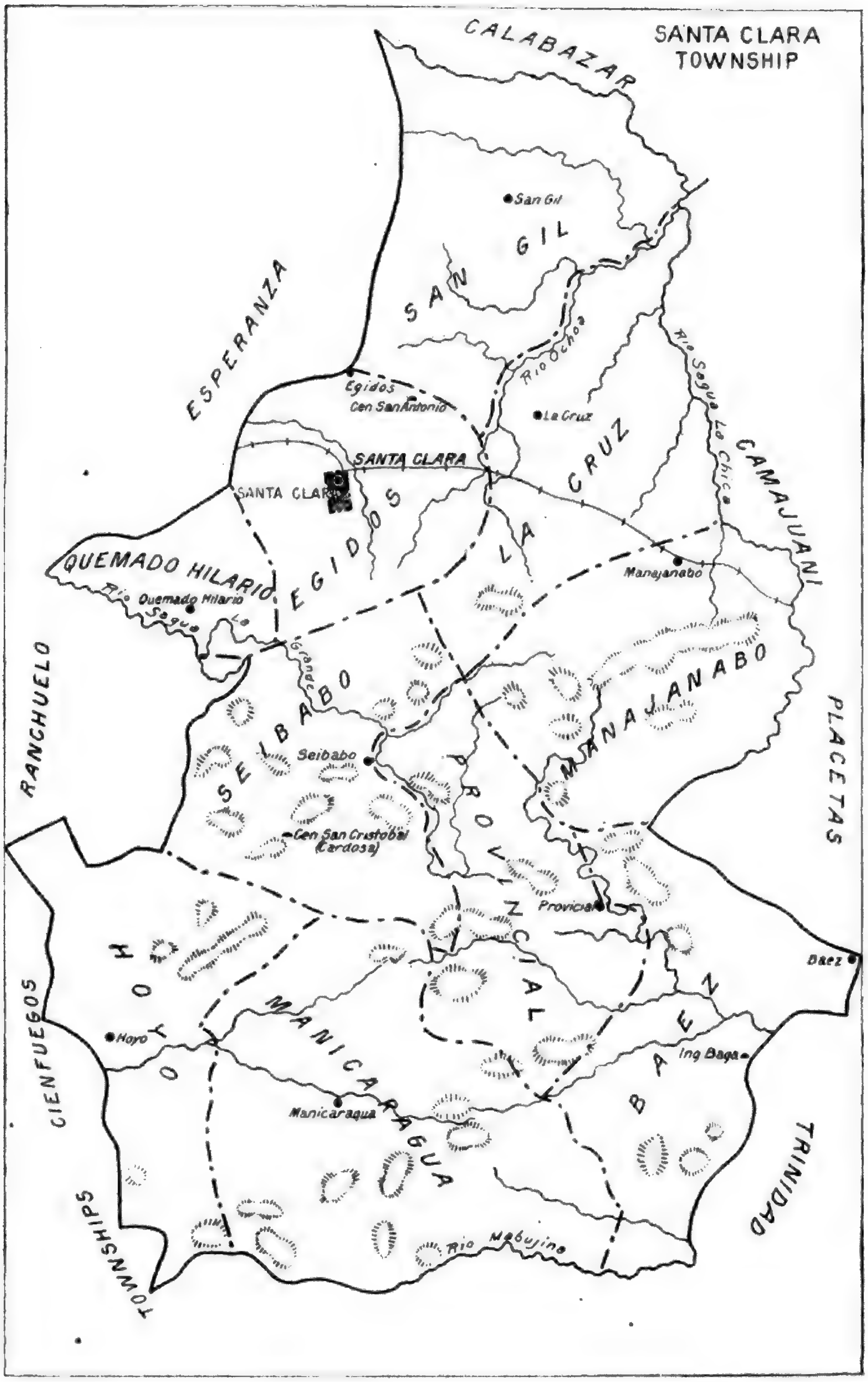
Centro.—Barrio. Rural district lying southeast of Ranchuelo and surrounding the town of San Juan de los Yeras.

San Juan de los Yeras.—Town. Situated 5 miles southeast of Ranchuelo. It is subdivided into two urban barrios, viz, Primero and Segundo. The surrounding country is rolling, having some low hills. Principal industries are sugar, tobacco, and cattle raising. Population, 1,601.

The water supply is obtained from wells, springs, and cisterns of rain water. It is ample and good.

In the town about 120 houses have thatched roofs and about 100 tile roofs. There are 8 houses of solid construction. The church is on calle San Lorenzo on the north side of town. The old Spanish barracks, situated on calle San Juan Bautista, on the south side of town, would shelter 100 men. It is a stone building with tile roof, and is now used as a school. The railroad station is on the north side of town. Telegraph station at railroad station. There are telephones at the depot, office of mayor, and rural guard quarters, connecting with Ranchuelo. No hospital. A few troops could be camped near the town, but it would be difficult to get enough water for many animals. There are two old stone blockhouses, one near the depot and the other on the west side of town. About 1½ miles northwest of town there is a ridge commanding the road for about half a mile.

Guayo.—Barrio and village. Village is about 3 miles southwest of Ranchuelo. Principal industries raising of sugar cane, tobacco and cattle. Population, about 200. Water supply obtained from wells; good and plentiful. Place contains a store, a schoolhouse and about 13 houses. By using all buildings about 100 men could be sheltered. No telegraph, no telephone, and no post-office. There is an old blockhouse, practically worthless, near the edge of the village.


SANTA CLARA
TOWNSHIP
CALABAZAR
ESPERANZA
San Gil
SAN GIL
Rio Ochoa
Rio Sagua La Chica
Egidos
Cen San Antonio
La Cruz
SANTA CLARA
SANTA CLARA
LA CRUZ
CAMAJUANI
EGIDOS
QUEMADO HILARIO
Rio Quemado Hilario
Sagua La Grande
Manajanabo
MANAJANABO
RANCHUELO
SEIBABO
Seibabo
Cen San Cristobal (Cardosa)
PROVINCIAL
Provincial
PLACETAS
Baez
HOYO
Hoyo
MANICARAGUA
Manicaragua
BAEN
Ing Baga
CIENFUEGOS
TOWNSHIPS
TRINIDAD
Rio Mabujina

Potrerillo.—Barrio and village. The village is 9 miles south of Ranchuelo. It contains no public buildings of any kind. There are 6 small stores with dwellings attached; all brick except one, which is of wood and used for store, dwelling, and tobacco shed. It is large enough to shelter 100 men. This is the only building in the village that would be useful for troops. The village was burned during insurrection. Walls of a number of brick buildings still remain. There is a brickkiln on the opposite site of the Caunao River. Population, about 125. Water supply obtained from river. Surrounding country mostly pasture land; small crops of tobacco, beans, and sweet potatoes.

Poza de la China.—Barrio. A large section of country. No settlement or point bearing the name. Contains central Santa María.

Sitio Viejo.—Barrio. A large section of country. No settlement or point bearing the name. Contains central Santa Rosa.

TOWNSHIP OF SANTA CLARA (CAPITAL, SANTA CLARA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Santa Clara	Carmen	Urban		3,447
	Condado	do		2,067
	Parróquia	do		3,884
	Pastora	do		4,415
	Puente	do		2,889
Báez	Báez	Rural	24	2,644
Egidos	Egidos	do	3	2,983
Hoyo	Hoyo	do	20	2,962
La Cruz	La Cruz	do	6½	2,244
Manajanabo	Manajanabo	do	10½	2,604
Manicaragua	Manicaragua	do	20	4,841
Provincial	Provincial	do	15	2,381
Quemado Hilario	Quemado Hilario	do	8	1,351
San Gil	San Gil	do	10	4,871
Seibabo	Seibabo	do	7½	3,037

Santa Clara.—Town. The town is situated in longitude 79° 57′ west, and latitude 22° 24′ north, approximately in the center of the province of Santa Clara, of which it is the capital. It is on high ground about 30 miles from the north coast and 45 miles from the south coast. The town is divided into five wards or urban barrios. Spanish troops were sent to the town to become acclimated and to recuperate.

It is an old town, having been founded in 1689.

The principal industry is the shipping and the storing of tobacco. The tobacco is raised in the vicinity and in the Manicaragua valley, 25 miles south, the product of which ranks in quality next to that of the Vuelta Abajo. In the work of sorting tobacco there are employed in the various places, at different times of the year, probably as many as 5,000 persons; men, women, and children. Some sugar cane is raised in the vicinity. The open, near-by savanna supports many herds of cattle. There is some wholesale business done. Many owners of property reside here. The provincial institute is in the city. Being the provincial capital, there are resident a large number of lawyers, officeholders, and politicians. The majority of the people are (or could be) in comfortable circumstances; few are rich.

The city is of irregular shape. The principal part is confined to the space partly inclosed by two small streams, the Arroyos Cubanicay and Bélico on, respectively, the east and west sides of the city and uniting at its northern limit. This space is approximately 1,000 yards east and west and 2,200 yards in a north and south direction. This part of the city is compact, the houses being built with common walls and flush with the sidewalk, and inclosing a restricted court yard. The houses are of mortar-covered brick with the usual tile roofing. They are cool and comfortable, though inclined to be damp. They are mostly of one story, there being but few two-story houses. Condado is a barrio lying west of Arroyo Bélico and is not so compactly built.

Among the hotels the Hotel Santa Clara is first class, and El Telégrafo and others are not so good. Grocery and provision stores are plentiful, and there are a few wholesale ones. The city meat is killed in the rastro or official abattoir. There is the usual market place. There are several hardware stores and a few machine shops, where only minor repairs can be made. There are quite a number of leather, saddlery, and harness shops.

The town has four Catholic churches. Only one of these structures is in good repair. The Methodist Church has an active mission.

The shops are owned and business conducted almost entirely by Spaniards.

Among the clubs are, El Liceo, the largest, and having as members all the principal Cubans; El Centro de la Colonia Española, whose members are the best Spanish element; El Círculo Liberal and El Círculo Nacional Liberal, represent, respectively, the two political parties whose names they bear. There are also two negro clubs, one of mulattoes and one whose members are of darker hue; these two clubs are distinct and nonaffiliating. All of these clubs have an important place in the social and economic features of the city.

The population of the city of Santa Clara is 16,702.

Water supply: Drinking water is taken from springs, some of which are from one-eighth to one-fourth of a mile south of the south end of the city, and others which are about 200 yards west of Arroyo Bélico and about due west from the Audiencia. Some families drink well, cistern, and creek water. Arroyos Cubanicay and Bélico on the east and west side of the city, respectively, furnish water for a variety of purposes. These streams are perennial and, while almost disappearing in the dry season, overflow their banks in the wet season and in freshets. Their origin is in hills from 2 to 3 miles south of Santa Clara. The Río Sagua is 6 or 8 miles south and west and Río Ochoa is about 6 miles east. Both are good sized streams and are subject to freshets. Nearly every house has a well or cistern, and these are very foul from centuries of cesspool filtrations. Spring drinking water is sufficient in all seasons, though falling off considerably in the dry season. The arroyos mentioned are ample for stock in wet and all of the dry season, except a few months at the end of the latter. Ochoa and Sagua are large streams.

Most people drink spring water without boiling it and no bad results seem to take place. The surgeons recommend that it be boiled. Water from streams is safe after boiling. Well and cistern water is unfit for use.

Distribution: Drinking water is distributed by carts from door to door. The city has no installed water system. Water for such would have to be brought from a distance. Borings have been made for artesian wells without success. The most favored project is to pipe water from Río Ochoa, a distance of 6 miles.

There is no sewer system. Garbage in receptacles is placed in the streets at night and carried off before morning. Excreta is deposited in cesspools, which are cleaned at irregular intervals.

The city is lighted partly by gas. Coal is imported from the United States. The gas plant is between San Miguel, San Agustín, and Jesús Nazareno streets, and Arroyo Bélico.

The electric-light plant has not been used for ten years and is now being dismantled. It is understood that the present owner of the gas and electric plants has sold out to an American company (1907).

Barracks: Lepanto Barracks, used as rural guard barracks, situated in southeastern portion of the city. Building is concrete structure and has a tile roof. There is a well of limited capacity in the patio, but outside wells are relied upon for the water supply. Capacity, about 150 men. Building has been renovated and is in good serviceable condition; ventilation is good; it is on a small elevation, ground sloping in all directions. A portion of it is two-story and all space on the second floor is suitable for living rooms.

There is a barracks, known as "El Carmen," situated in the northwestern section of the city, on the corner of San Pablo and Máximo Gómez streets. Building is one-story, constructed of concrete and has a tile roof. It is rectangular in shape and has a capacity for 70 men. Contains two bathrooms, a kitchen, five small storerooms, an orderly room, three squad and one noncommissioned officers' rooms. The hallway could be used for sleeping space if necessary. There is a small well in the patio, but the main source of water supply is from the Chamberí wells, on the other edge of the city. There is an open space in front that can be used as a parade for dismounted formations.

In addition to these, the following is a list of buildings that are suitable for barracks, stables, hospitals, etc. The list does not include buildings used as provincial and city offices:

	Location.	Present occupancy.	Capacity (men).	Remarks.
1	Independencia street 68	Warehouse	100	Or 100 horses.
2	Alemán street 35-37 (corner Marta Abreu).	Private dwellings	50	
3	Cuba street 23, between San Miguel and Candelaria.	Tobacco warehouse	100	Formerly Spanish civil guard barracks.
4	Cuba street 33, between San Miguel and Jesús Nazareno.	.....do	25	Or 40 horses.
5	Northwest corner San José and San Cristóbal.	Private dwelling	50	Suitable for hospital.
6	Northeast corner Cuba and San Cristóbal.	.....do	25	Do.
7	Parque 12	Hotel Santa Catalina.	50	
8	Unión and Buen Viaje	Convent, course of construction.	150	Probable date of completion, 1908.
9	Southwest corner Independencia and Antonio Macéo.	Hotel El Telégrafo	100	
10	Southeast corner San Pablo and Antonio Macéo.	Carpenter shop	....	50 horses.
11	Southwest corner San Matéo and Antonio Macéo.	Tobacco warehouse	75	
12	Antonio Macéo 16, between San Matéo and San Vicente.	.....do	40	
13	Antonio Macéo 24, between San Matéo and San Vicente.	United States military hospital.	25	Hospital.
14	Northeast corner Luis Estévez and Santa Rosa.	Hotel Santa Clara	100	
15	Northwest corner San José and Marta Abreu.	3-story warehouse and dwelling.	100	
16	Marta Abreu 7, between San José and Gral. B. Zayas.	Circulo Liberal	25	
17	Parque, east side of Plaza	Licéo (club)	100	
18	Building 24, Luis Estévez (near station).	United States barracks.	125	
19	La Unión street, northwest of railroad tracks.	United States cavalry stables.	....	180 horses.
20	Southwest corner Máximo Gómez and Callejón streets.	Private residence	....	Hospital, 25 beds.
21	Building 19, south end San José street.	Audiencia (courthouse).	300	Formerly Spanish infantry barracks; occupied by United States troops in first intervention.
22	San José, in rear of theater	Charity school	40	
23	North side Candelaria, between Colón and Antonio Macéo.	Private dwelling	50	

In addition to the above-mentioned stables there are some small fenced plots just south of the railroad and west of Arroyo Bélico; water can be obtained from the latter. There are also some small fenced corrals just south of San Juan de Dios Hospital, on prolongation of Cuba and San José streets, in the vicinity of Lepanto Barracks. Similarly on all sides of the outskirts of town are small fenced plots that could be used.

See buildings 5, 6, 13, and 20, mentioned above, for buildings that would be suitable for hospitals. State of repair and sanitary condition good. Water supply as for city at large.

In addition there is the San Juan de Dios Civil Hospital, with a capacity of 100 beds. Repair and sanitary condition good. Water supply as for city. The springs are distant about 300 yards.

La Purísima Concepción Hospital is a private hospital; capacity, 25 beds; repair and sanitary condition good.

The present United States Military Hospital is at 24 Antonio Macéo street (1907). Accommodations small; not over 15 beds, but conditions of repair and sanitation good.

A leper hospital is situated near the cemetery, on Independencia street, about one-half mile west of Arroyo Bélico. Present inmates about 40 in number.

The buildings described above under barracks as being warehouses are suitable for quartermaster and commissary storehouses. In addition thereto, some of the buildings at present used as stores could be utilized as such. Among these are:

Northeast corner Parque and General Gerardo Machado.

Southeast corner Independencia and Callejón de Vizcainos (Plácido).

Northeast corner Colon and Dé la Gloria.

Southwest corner of Colón and San Cristóbal.

Each building is large enough for a supply of commissaries for a regiment. Their state of repair is good, but there are no tramways or railroads to them, and no unloading platforms.

Important offices: City hall, situated on Parque. Office of provincial governor, corner Juan Bruno Zayas and Independencia streets. Telegraph office situated on corner of Marta Abreu and Juan Bruno Zayas streets. Post-office is on Martí street.

Telephone system has 28 instruments in use; service fair; office, San Lorenzo No. 4. There are two private lines. One starts from San José street No. 17, the office of the San Antonio sugar estate, and runs to the ingenio, about 4 miles northeast of town, with a spur to the junction of the San Antonio private railroad with the main line of the Cuban Central Railroad. Junction point, 2½ miles from town and 3⅛ miles from ingenio. The other private telephone line runs from Parque No. 5 to La Pastora sugar estate, about 7 miles southwest of town and about 3 or 4 miles southeast of San Juan de los Yeras.

Ice machine is in rear of the audiencia and on east bank of Arroyo Bélico. This was built by the American forces during the first intervention and turned over to the Cuban Government when the troops were withdrawn. After a short time the Cuban authorities ceased to operate it. It is occupied by poor families, is in poor state of all around repair, and to start it again would require almost its entire refitting.

Camp site for a battalion of infantry on the Cubanicay River northeast of Santa Clara. Several sites to south of city and one on the Bélico River to the northwest. Water as for city. Wood would have to be bought. There is some grazing on the savannah south and west of town. Sanitary conditions good, in dry season at least. There would be much mud in rainy season, though conditions for drainage are favorable.

There are no defenses. La Gronomica is a two-story blockhouse situated on the northeast side of town near the Camajuaní carretera. It has not been used since Spanish times and would be of little use now.

The town is an eastern terminus of the Cuban Central Railroad and western terminus of the Cuba Company Railroad. The tracks run through the extreme north end of the city. All the sidings are in that section. There are no spurs. Each company has siding trackage for about 50 cars. The station is a covered brick and mortar building, with two through tracks, each holding (under cover) 3 coaches. A part of the station, the west end, is a warehouse 100 by 35 feet, with platform extension and having unloading space for 3 freight cars. There is a water tank on the north side of the track just west of Arroyo Cubanicay. There is a coal platform and stock chute, with some small corrals, halfway between the station and Arroyo Cubanicay. Three coal cars can be unloaded at a time at the platform and 3 stock cars at the chute. Stock can be watered in the arroyos near by. The facilities for entraining and detraining troops and for loading and unloading freight and stock are fair, if not good.

Roads leaving town: On the north to Sagua and to San Gil, Calabazar, and Encrucijada. On the east the carretera to Camajuaní and Remedios; to Placetas. On the south, road following the government telegraph line to Guaracabulla, and points east and south; two routes to Manicaragua, uniting at Seibabo 7½ miles south. One of these routes is the approximate line of the proposed carretera to the south. On the west, the proposed carretera starts from La Pastora street and follows an old road to Robles, an old ingenio about 8 miles southwest. There is also a road leaving via Marta Abreu and Independencia streets and running to Ranchuelo, Esperanza, and all points west.

Attack and defense: The terrain on which Santa Clara is situated is rolling, and the plaza is about 300 feet above the sea. One mile east, between the Camajuaní carretera and the railroad, there is a saddle-shaped hill, El Caprio, about 200 feet higher than and commanding the city. South and west of the town, distant 2 to 3 miles, are hills ranging up to 600 and 800 feet in height. Between them and the town the terrain is open, rolling, and uncultivated. The arroyos which unite here, oppose some muddy holes to a passage. The city is oblong in general shape, its greatest axis being from about west of north to east of south. It therefore presents a salient toward both the north and south and a broadside toward the east and west. The north end is the lowest. The railroads cross this end. Depending upon the nature of the warfare, this might be an object of consideration. For defense of the town the Spaniards and Cubans placed barricades, wire entanglements, and temporary blockhouses in the streets and near the edge of the town. History repeats itself, and it is probable that this system would be again adopted.

Most of these defenses seem to have been erected in the south and west part of town. On the west side is the scattered barrio of Condado. Separating it from the town proper is Arroyo Bélico. This stream and Arroyo Cubanicay would at times oppose somewhat of an obstacle to attack. The method of attack would depend largely upon the size and composition of the opposing forces. For a force of all arms, several plans are open. One is to deploy under protection of El Capiro and place artillery thereon, and the other is to advance over the hills from the west. An enveloping or secondary attack should advance from the south. An advance from the north could approach nearer the city under cover than from any other direction and, except for some mud in the arroyos above mentioned, should have little to oppose it. A well placed and previously developed secondary attack should make this advance successful. On account of the length to be defended the east and west sides would be hardest to defend, the west possibly harder, because more extensive.

Báez.—Barrio and village. Barrio contains ingenio Baga. The village is 24 miles by road southeast of Santa Clara. It is 3 miles south of Guaracabulla. Population, about 300. Drinking and washing water is obtained from a central well. There are one or two other wells in houses. Some washing water is carried from the Arroyo de Báez by people living close by. It is said that the large well always has a plentiful supply. The Arroyo de Báez is a small stream about 4 feet wide. All water should be boiled. Quarters could be obtained for about 25 men. There is a post-office. A telegraph line passes through the village, but there is no office. Most of the buildings are frame with thatched roofs. No good camp site near the village. On the south, east, and west sides of village are old Spanish redoubts, 20 feet square. The parapet has been about 5 feet high and ditch 4 feet deep. They are grass-grown and nearly filled in. Roads: One north to Guaracabulla and Santa Clara, one south to Fomento and Trinidad, and one southeast to Sancti Spiritus. The best line of approach for attack is from the east.

Egidos.—Barrio and village. The village is a scattered settlement of 15 to 20 houses and a schoolhouse. It is 3 miles north of Santa Clara, on the road leading to the Cuban Central Railroad. Barrio contains central San Antonio.

Hoyo.—Barrio and sitio. The barrio is a rural district 5 or 6 miles in diameter and in which is a store of the same name. Fine tobacco is raised in the district. The store Hoyo is about 6 miles northwest of the town of Manicaragua and 20 miles southwest of Santa Clara.

La Cruz.—Barrio and sitio. The sitio is 6½ miles by road northeast of Santa Clara. Consists of a deserted house and ruins of a small Spanish cuartel situated on a hill called Loma Cruz. There is also a stone blockhouse in poor condition.

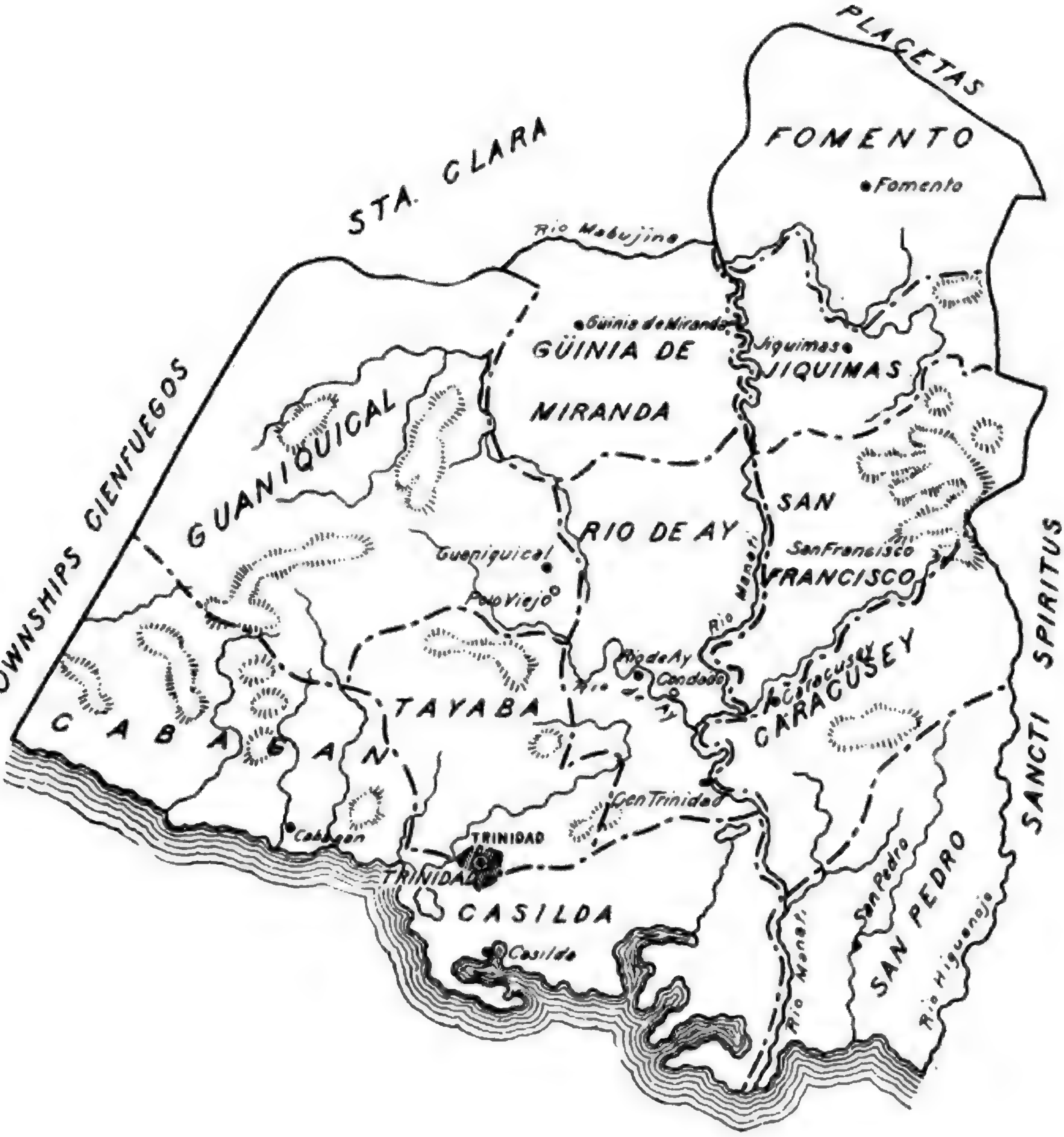
Manajanabo.—Barrio and village. The village is about 10½ miles east of Santa Clara, on the Cuba Company Railroad. It is a scattered place; the dozen or so houses constituting it are along the railroad. Population, about 100. Place has 3 general stores and a school building. Most of the houses are thatched huts. At railroad station is a switch 100 yards long.

Manicaragua.—Barrio and town. A town of 1,434 inhabitants, about 20 miles by road south of Santa Clara, 27 miles from Trinidad, and 30 miles from Cienfuegos. Drinking water is obtained from a spring near the cemetery on the west bank of the Arroyo de Oro. The quantity is plentiful and quality good; it is distributed by means of buckets. Water for other purposes obtained from cisterns and from the Arroyo de Oro. The latter stream is probably contaminated by wastes from the town. There are few buildings suitable for barracks. Schoolhouse would accommodate 40 men; rural guard quarters, 15 men; judge and mayor's house, 75 men. The latter is in bad repair. On south side of Matagua-Manicaragua road, one-fourth of a mile west of town, are the remains of a redoubt. About 200 yards north of town, on high ground above the Arroyo de Oro, commanding the ford on the above-named road, is another redoubt. A camp site of about 20 acres can be found 1 mile southeast of town on the Mabujina road. Water would have to be obtained from Arroyo de Oro; wood could be obtained half a mile distant; grazing good. Large numbers of cattle are fattened in the vicinity. Horses, mules, and draft oxen are plentiful.

Provincial.—Barrio and village. The village is about 15 miles southeast of Santa Clara. Country crossroads village, situated at foot of a long hill. Is center of a barrio 3 miles in radius. Consists of about 10 houses. Water obtained from wells. No houses suitable for barracks and no good camp site in vicinity. Roads lead out of the village to Santa Clara, Guaracabulla, Manicaragua, and Placetas. Best line of approach for attack is from the northeast.

Quemado Hilario.—Barrio and sitio. The sitio is 8 miles by road southwest of Santa Clara. Consists of a general store and 2 houses. Water from a well.

TRINIDAD TOWNSHIP



San Gil.—Barrio and village. The village is a small place of 10 or 11 houses about 7 miles south of Calabazar and 10 miles by road north of Santa Clara. It also has 2 stores.

Seibabo.—Barrio and village. The village is about 7½ miles due south of Santa Clara on direct route to Manicaragua. A country crossroads of 7 houses. Has 2 small stores. All are frame buildings. Water supply obtained from a small creek called Arroyo Salvador. Quantity plentiful; quality good; distributed by bucket. Houses also have wells and cisterns, the water of which is not considered good. One house with large porch (schoolhouse in same building) would accommodate 25 men inside and 25 under porch. Camp site for a regiment on creek one-half mile northeast of village. Water plentiful; grazing fair; no wood in vicinity. Two roads run north to Santa Clara, one east to Rebarcadero-Guaracabulla, one south to ingenio Cardosa and Manicaragua, one southeast to Provincial and Manicaragua, and one northwest to San Juan de los Yeras. Ground to south is highest, being a hill about 150 feet high, and affords a good approach for attack. In the barrio is the central San Cristóbal (Cardosa).

JUDICIAL DISTRICT OF TRINIDAD.

Township:	Population.
Trinidad	29,548

TOWNSHIP OF TRINIDAD (CAPITAL, TRINIDAD).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Trinidad	Primero, Ciudad	Urban		4,367
	Segundo, Ciudad	do		3,158
	Tercero, Ciudad	do		3,672
Cabagán	Cabagán	Rural	9	1,267
Caracusey	Caracusey	do	15	861
Casilda	Casilda	Urban and rural.	3	2,896
Fomento	Fomento	Rural	30	2,990
Guaniquical Polo Viejo.	Guaniquical	do	12	1,284
Güinía de Miranda	Güinía de Miranda	do	21.5	1,596
Jíquimas	Jíquimas	do	23	1,486
Río de Ay Condado.	Río de Ay	do	10	3,170
San Francisco	San Francisco	do	20	848
San Pedro	San Pedro	do	16	1,118
	Táyaba	do	.2	835

Trinidad.—Town. An important town situated about 78 miles south of Santa Clara, and 42 miles southeast of Cienfuegos. It is inland and about 3 miles north of its port, which is called Casilda. A very excellent military road connects these two towns, and the same road continues through the town of Trinidad and about 4 miles northeast. This road will soon be finished as far as Condado (1907). Eventually it is intended to connect Santa Clara and Casilda by a fine military road. The town is divided into three urban barrios.

It is situated on the side of a hill about 300 feet above sea level. The streets are narrow and for the most part cobble. Pavements are small and in very poor condition. It is a very old town, dating back as far as 1514, and very little change has been made in the last fifty years.

Population is 11,197. The largest part of these are descendents of old Spanish families. About 33 per cent of the population is colored.

The water supply is very inadequate and obtained in two ways: Cisterns and wells (private); and cisterns (public) into which water is pumped from the Táyaba River, one-fourth of a mile west of the city. The river water is pumped into a reservoir in the upper plaza, in the northern part of the town; capacity about 34,800 gallons. From this cistern small pipe lines run to various stations on street corners where people draw their water from one-inch spigots. The pumping station is on private property near the bank of the river. It is probably 24 feet above river level. A four-cylinder pump is used. The pipe running from the river to station is 5 inches in diameter, and the one running from pumping station to cistern in town, about 4 inches in diameter. About 27,600 gallons of water may be pumped daily. There is another cistern called "Cistern of the King" in the northeast part of city, on the outskirts; capacity 300,000 gallons. It is used at times and filled from the same pumping station.

No sewer system; all surface drainage.

There is a barrack on a hill, "La Popa," north of the city, which will hold a battalion if necessary. In good repair; built in the form of a hollow square. Inside courtyard there are two cisterns, one (10 by 10 by 20 feet) into which a one-inch pipe leads from the main supply, and the water is pumped by the city pumping station. The other and larger cistern is filled altogether by drains running from the roof. No modern closets in these barracks. South of the city there is a still larger barrack that is now being converted into a railroad station. It has one small cistern supplied by drains from the roofs. The rooms are all large and in very good condition of repair; probably more than a battalion might be quartered in this barrack. Another small barrack is situated opposite the lower plaza in about the center of the town and connected with an old church; capacity, about two companies. There is one cistern supplied by drains from the roofs; it could not be connected with city pipes. This barrack is not in good repair.

Stables: There are no stables of military value. Almost every store has a small stable in rear, but no great number of animals could be kept in any one. At the rural guard quarters there is a fairly large stable for 12 or 15 animals.

Hospitals: The General Wood City Hospital, on the northeast outskirts of the town, would accommodate one battalion. This is not an up-to-date institution on account of lack of funds, but it is above the average of the hospitals in the island. There are at least three churches situated in various parts of the city which might be used as hospitals in case of emergency; they are in very good repair. Quite a large one is near the upper plaza.

Storehouses: The best building for quartermaster and commissary stores would be the Spanish barrack (now railroad station) south of the city. A standard-gauge track runs from the courtyard of this building directly to the wharf at Casilda.

Important offices: The mayor's office is opposite the lower plaza; post-office, corner of Desengaño and Gloria streets; telegraph office in the same building as post-office; telephone office (there is one line running from Casilda to Trinidad; central in Trinidad) is on Gutierrez street, midway between Colón and Rosario streets, in the printing office of the town paper, El Eco; the cable office is at Casilda.

Ice machine is in northwest part of city. Uses water from the Táyaba River, near which it is situated. Capacity, 16,000 pounds per day.

Fairly good camp sites may be found outside of the city for small bodies of troops. The drainage would be good, grass and water plentiful, but fuel scarce. West of the town is the best location for small camp sites.

Defenses: About one mile north of the town is an old Spanish blockhouse and magazine in very poor condition, but which could be very quickly repaired and used to advantage. It is perhaps 100 by 150 feet and made of stone and plaster. On the military road leading northeast from town, about one-fourth mile out, is another blockhouse, in fair condition, built of stone; has two towers. This also might be used in case of emergency. On the roads running west and southwest from town there are blockhouses protecting the entrance to the city. These are in poor condition, but might be used to some advantage. All these defenses are built of stone and plaster and at one time were very serviceable.

Roads leading out of town: Military road runs south to Casilda. Road runs northeast toward Magua and Manacas; military road for 4 miles, and in good state of repair for another 3 miles. Trail leads about southwest through thick underbrush and swamps to coast line and joins trail along coast to Cienfuegos. Road to Cienfuegos runs generally west and southwest. Very rough road, mostly trail, crosses Río Táyaba at good ford. Road leaves town bearing east to Sancti Spiritus by way of San Pedro; very rough dirt road.

The hardest position to defend, should the town be attacked, would be the southern and eastern parts of town, as there is a great deal of thick underbrush. Under this cover troops might easily advance, while to the north and west are hills which would make the approach more difficult.

Cabagán.—Barrio and sitio. The sitio is a group of 4 small shacks on the main road, Trinidad to Cienfuegos, 9 miles west of Trinidad. It is on low ground 1 mile from the mouth of the Cabagán River.

Caracusey.—Barrio and village. The village is about 15 miles northeast of Trinidad, on the road to Sancti Spiritus and on the left bank of the Caracusey River. It is a country village built along the road and the houses are mostly one-room huts. Some few are built of mud and plaster and one or two are frame. The population is about 500. Water supply is obtained from the Caracusey River by means of buckets.

The only two buildings of any size are in the extreme east section of the village and used, respectively, as a club and quarters for the rural guard. There is a small stable in the rear of the rural guard quarters. The post-office is in the center of the village. There is no railroad connection, no telephone and no telegraph. A small camp site could be found northeast of the village, but fuel is scarce. Roads lead east to Sancti Spiritus, southwest to Trinidad, and west of north to Condado. All are poor dirt roads and in very bad condition in the rainy season.

Casilda.—Barrio and town. The town is the port of Trinidad, and situated 3 miles south of that city. Population, 1,246. Town is built principally along the military road leading to Trinidad. The houses are all small. The only two industries in the town are a tanning factory and an establishment for the making of vermicelli.

Water supply: A 1-inch pipe line running from the Trinidad cisterns has spigots on various street corners. There are also a few wells. Except in the rainy season the water supply is very inadequate.

There is no sewer system; everything is surface drainage. The town is lighted by oil lamps.

The only buildings suitable for sheltering troops are two warehouses, each 150 by 200 feet. They are right on the harbor front, one at the new wharf and one at the old wharf. They are in fair condition of repair, but the ground is very low and damp in the vicinity. Between these warehouses, which are about 200 yards apart, is a small shed, which will be used as a railroad station when the road is completed from Casilda to Trinidad. This building is about 50 by 100 feet.

There are no hospitals or buildings which would be suitable. The nearest hospital is in Trinidad, 3 miles distant.

The most important office is the cable office; lines run to Cienfuegos and on down the coast to Tunas de Zaza and Santiago. Post-office is a small frame building on the military road, about the center of town. There is no telephone central, but there is a telephone at the wharf in the office of the agent of the steamship line.

No really good camp sites in the locality.

There are no railroad facilities at present. A line from Casilda to Trinidad has been in course of construction for the past two years. This line will eventually be extended from Trinidad to Condado and finally to Santa Clara, thus opening up this section, but it will take many years at the present rate of construction (1907).

There are three roads leading out of town. The most important is the one north to Trinidad; a fine stone road well preserved. The second, running northwest to Cienfuegos, along the coast, is not a very good road; mostly a trail. The third runs northeast and winds around to north, reaching Trinidad by a longer route. The north side of the town would be the hardest to defend on account of the open country.

In conclusion it may be said that Casilda is strictly the port of Trinidad, has a very poor harbor, a very treacherous channel and very little business except in the shipping line.

Fomento.—Barrio and village. The village is 30 miles by road northeast of Trinidad. Population, about 800. Has a post-office and telegraph office. No railroad connection. Houses are built of wood. Old stone fort in northwest part of village. Village could shelter about 300 troops. Good camp ground in vicinity. Plenty of good water for men and animals in stream one-fourth of a mile east of village. Drinking water in village obtained from wells. Telegraphic communication with Placetas.

Guaniquical.—Barrio and village. A very small village of about 20 thatched huts. Unimportant. Barrio also contains the village of Polo Viejo.

Polo Viejo.—Village. Situated near Guaniquical and about 12 miles from Trinidad. A country village which in size and appearance is exactly like Caracusey. Water is obtained from brooks.

Güinía de Miranda.—Barrio and village. The village is a place of 12 or 14 houses in a radius of about one and one-half miles, situated 21½ miles by road northeast of Trinidad. It has three stores and barrack of rural guard. Population, about 100. Two good camp sites, with water and grazing, on Parado River, one-fourth of a mile south. There is a cemetery one-half mile south, just west of trail to Jíquimas, and near it are the ruins of an old stone blockhouse. A main road runs from the village northeast to Fomento.

Jíquimas.—Barrio and sitio. A small settlement in the mountains, 5 miles south of Fomento and 23 miles northeast of Trinidad. Consists of a store and a couple of houses. The government telegraph line from Santa Clara and Fomento to Trinidad passes through the sitio. Trails run north to Fomento, east to Tunas and Sancti Spiritus, and west to Sopimpa and Trinidad. The latter trail is one of the three cross-mountain routes in this section.

Río de Ay.—Barrio and sitio. Central Trinidad is in the barrio. The point bearing the name consists of a burned church and a cemetery. Near the river of the same name is a village named Condado.

Condado.—Village. About 12 miles northeast of Trinidad. It is a very small village on the road leading northeast to Güinía de Soto. The houses are all small and built mostly of wood and plaster. There are about 6 small stores in the village and a small house used as a post-office. A telegraph line runs through the village, but there is no office. Population, about 400. Water supply is obtained from a small well which is supplied by a spring.

Roads lead out of the village southwest to Trinidad, west to Río de Ay, and northeast to Güinía de Soto. All are very poor and for the most part trails.

The village lies in a small valley and could be attacked successfully from any direction.

San Francisco.—Barrio and sitio. The sitio is a small settlement of four houses about 4 miles northwest of Gavilanes, and 20 miles northeast of Trinidad. Besides the sitio of the name the barrio contains a dairy farm of the same name, situated 8 miles southwest of the sitio on the road to Trinidad, which town it supplies with milk.

San Pedro.—Barrio and village. The village is about 15 miles east of Casilda (the port of Trinidad) and about 18 miles northwest of Tunas del Zaza. It is on a low, level stretch of land, 3½ miles east of the Río Manatí. The surrounding country is more or less covered with a chapparal called "aroma," a scrubby bush resembling the mesquite of the southwest. The principal industry seems to be stock raising and agriculture, though a little cultivated land is in sight.

Water supply: The sources are as follows: Río Cañada on east side of village; wet season only, and then probably muddy. A water hole one-fourth of a mile southeast of town; water generally clear, but animals have access to it and it is necessarily a dangerous supply, as pool has no outlet. The Arroyo Yaguaramas is 2½ miles north toward Palmarejo and is a rapid-flowing stream of good water at all seasons. Apparently this last-mentioned supply is not used, but it is accessible and the roads are fair.

No sewer system and no system of lighting.

There is a small cuartel at the southeast corner of village. This was formerly used by Spanish garrison, and consists of three main rooms. The central room is about 30 by 25 feet, and opens into a smaller room at each end. The smaller rooms are about 15 by 25 feet. The porch extends out about 10 feet all around, but the rear and ends have been built up with mud walls to give additional room space. There was at one time a blockhouse in front, but only the ditch remains. Sanitary condition good. The church in center of village has thick brick walls and has no tower. There are two brick residences at the southwest corner of village that would accommodate a headquarters, hospital, or about 75 men. With these exceptions, there are no buildings of military importance.

No stables. The barbed-wire fence inclosure back of old cuartel could be used for corral. Good grazing on open ground on south side of village, but no water near at hand.

The cleanest place for a hospital would be in immediate vicinity of post-office.

Post-office and schoolhouse in village.

Trail leads south to an old landing on coast; cart road leads west, from southwest corner of village, to cane fields and ferry skiff on Manatí River, 3½ miles distant; old established cart road to Zaza and Tunas from southeast corner; cart road to Caracusey; cart road to Palmarejo leaves from north end of village.

The country to the east and northeast is open and rolling and offers the best line of approach for attack.

Táyaba.—Barrio. Begins on the western limits of the town of Trinidad. Contains nothing but a few scattered thatched huts.

PROVINCE OF CAMAGÜEY.

TABLE OF DISTANCES, IN MILES, BETWEEN TOWNS IN PROVINCE OF CAMAGÜEY.

Alta Gracia.																				
126	Arroyo Blanco.																			
38	96	Caobillas.																		
32	150	62	Cascorro.																	
120	32	82	144	Chambas.																
91	35	53	115	38	Ciego de Ávila.															
49	162	74	17	156	127	Guaimaro.														
88	180	92	47	171	143	59	Guayabal.													
88	52	66	112	55	17	124	147	Júcaro.												
77	165	77	64	159	130	47	13	134	Junco.											
10	136	48	42	130	101	59	97	98	87	Minas.										
96	38	58	120	24	24	132	150	41	135	106	Morón.									
33	169	80	42	163	134	52	91	131	99	33	139	Nuevitas.								
19	107	19	43	101	72	55	71	69	58	29	77	62	Camagüey.							
48	78	16	72	93	43	86	102	50	87	58	67	91	29	San Gerónimo.						
74	156	74	64	159	122	64	34	115	21	84	129	87	55	81	Santa Cruz del Sur.					
39	165	77	24	158	130	34	39	127	81	29	185	18	58	87	69	San Miguel				
67	90	33	91	83	55	103	108	52	95	77	74	110	48	17	74	106	Vertientes.			
23	111	23	47	105	76	59	77	73	62	33	81	66	4	33	51	62	52	Yaba.		
38	88	26	62	91	53	74	92	60	77	48	77	81	19	10	74	77	27	23	Yeguas.	
364	238	334	388	270	273	400	418	290	403	374	276	407	345	316	394	403	328	349	326	Havana.

PROVINCE OF CAMAGÜEY.

LOCATION AND BOUNDARY.

This province is the most extensive yet the least populated of all the provinces.

It lies between the provinces of Santa Clara and Oriente, being separated from the former by the rivers Jatibonico del Norte and Jatibonico del Sur, and from the latter by the Cabreras and Jobabo rivers.

It is bounded on the north by the Bahama Channel, on the east by the province of Oriente, on the south by the Antilles Sea, and on the west by the province of Santa Clara.

AREA AND POPULATION.

The area of the province is about 10,425 square miles.

Its length is about 160 miles and its width about 100 miles.

The population is 118,269, divided as follows: Native white, 75 per cent; foreign white, 6.7 per cent; colored, 18.3 per cent; or white, 81.7 per cent; colored, 18.3 per cent.

JUDICIAL AND MUNICIPAL DISTRICTS.

It is divided into two judicial districts, viz, Camagüey and Morón. It is also divided into five municipal districts or townships, viz, Camagüey, Ciego de Avila, Morón, Nuevitas, Santa Cruz del Sur.

PROVINCIAL GOVERNMENT.

There is a governor and a provincial council of eight members, elected by the people. Each municipal district is presided over by a mayor, aided by a municipal council.

CAPITAL AND PRINCIPAL TOWNS.

The capital is Camagüey, situated in the heart of one of the wildest parts of the province. It has, however, railroad connection with the port of Nuevitas and the other large cities of the island.

The principal towns of the province are Nuevitas, Morón, Ciego de Avila, and Santa Cruz.

GEOGRAPHY AND TOPOGRAPHY.

The mountainous character of the country to the east, in Oriente Province, begins to be modified in this region, which consists mainly of broad, rolling plains with shallow stream valleys.

There are a few hills which pertain to the Cubitas and Najasa groups. The first-named group of hills is to the north and the latter to the south of the city of Camagüey.

The plains of Camagüey are very extensive. Some are dry and rocky, where only a species of straw grass, a white cottonwood tree, and certain palm trees thrive. There are, however, certain locations with abundant pasture grounds, watering places, and hilltops, which are very well adapted for cattle raising. The most extensive of these plains are those of Lázaro and Cubitas. There are few elevations, and none more than 1,500 feet in height.

On the western boundary line are found some hillocks which are the forerunners of the Sierra de Jatibonico, and therefore belong to the Sabana group. The names of these knolls are La Campana, Naranjo, etc. To the east of Morón and not far from the northern coast is an isolated ridge known as La Cunagua and Sierra de Judas.

The other elevated portions of the province belong to the Cubitas and Najasa groups. The Cubitas group is the more important one and takes its name from the Sierra de Cubitas, which extends from west to east between the Jigüey and Máximo rivers, and equally distant from the city of Camagüey and the north coast. The most important points are known as Cerro de Limones and Cerro de Tuabagüey. These two are separated from each other by a gorge about five-eighths of a mile in length and 60 feet in width, through which the Guanaja road passes. This natural passage, the almost vertical walls of which attain the height of about 120 feet, is called Abra, or Boca de Cubitas.

Another noteworthy pass is called Paso de Lesca, named after General Lesca, of the Spanish army, who took a column of troops through it to the relief of the town of Camagüey. The following-named hills are a part of the Cubitas group: Lomas de Camaján; farther east is the Cerro de Bayatabo; and between the Sierra de Cubitas and the city of Camagüey is the Loma del Yucatán, in which are the headwaters of the Caunao and Máximo rivers.

The principal peaks of the Najasa group are the Sierra de Guaicanámar, Najasa, and Chorillo.

To the southeast of the above and east of Camagüey are found the lesser points of Guáimaro, Sibanicú, Cascorro, and La Deseada, which are considered as belonging to the Najasa range.

RIVERS.

The following rivers have their outlets on the north coast: Chambas or Los Perros, a close neighbor of the Jatibonico del Norte, which forms the western limit of the province. La Yana, a small stream emptying into the Laguna de Leche. The Caunao and Máximo rivers are two streams that have quite a volume of water. Between these two rivers is the Jigüey, which encircles the Sierra de Cubitas. The Máximo has its outlet in the Bahía de Sabinal.

At Puerto de Nuevitas the Saramaguacán, the Cascorro, Nuevitas, and others of less importance empty into the sea. The mouth of Río de las Cabreras is in the marshes of the coast line.

On the south coast are many unimportant streams, such as Río de los Negros, Vertientes, Santa María, and others.

The San Pedro River is formed by the junction of the Tínima and Jatibonico, which pass through the city of Camagüey. It is afterwards known as El Camujiro, because it receives the waters of springs of the same name, and toward its outlet is known as Río de Santa Clara.

Río San Juan de Najasa and Río de Sevilla are important rivers. The outlet of the former is to the east of the port of Santa Cruz. Between the two above-named rivers are a number of smaller ones, which run from the Lomas de Najasa down to the swamps and estuaries of El Junco, El Guayabal, etc.

To the east of the Río Sevilla is the Tana.

El Jobabo, with springs in the Lomas del Rompe, forms the dividing line between Camagüey and Oriente.

COAST LINE.

On account of the slight elevation of the terrain in the interior of the province, there is but slight slope toward the coast lines, which, both north and south, are low and liable to overflows. Along the north coast are the three large islands known as Cayo Coco, Cayo Romano, and Guanaja. These islands are inhabited by fishermen.

The south coast is fringed by the archipelago Los Jardines de la Reina, which inclose the Laberinto de los Doce Leguas.

AGRICULTURE, INDUSTRY, AND COMMERCE.

In this province agriculture does not play an important rôle, although sugar and tobacco plantations of some magnitude are situated in the fertile country surrounding the city of Camagüey.

Formerly the province was rated as a cattle and horse raising country, and there is still fine pasturage, but the herds have been sadly diminished by the numerous rebellions.

There are very extensive forests which produce valuable woods, including cedar, ebony, and mahogany.

The manufacture of cigars is somewhat extensive.

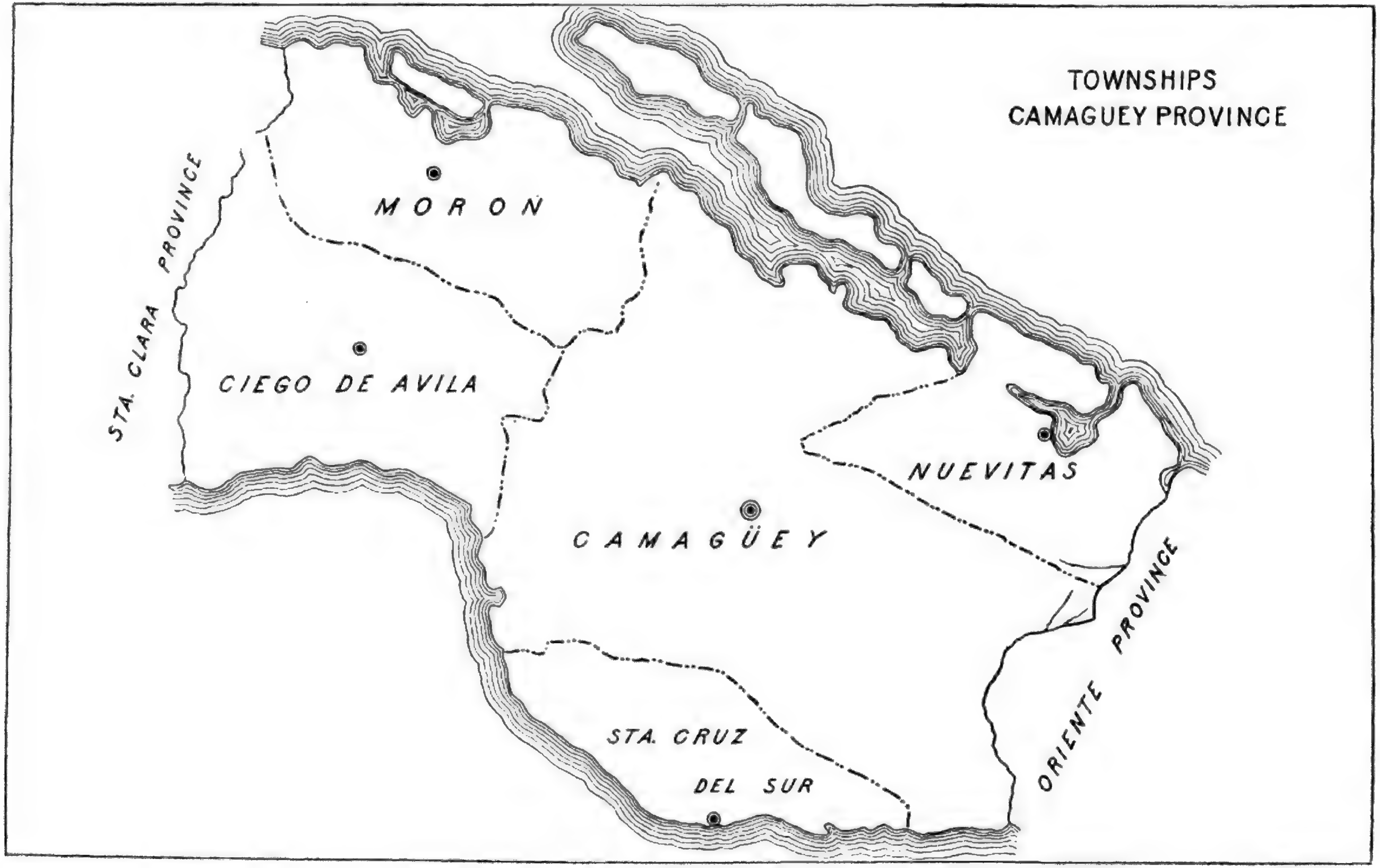
The principal exports are sugar, tobacco, wax, honey, and various classes of lumber.

JUDICIAL DISTRICTS AND MUNICIPAL DISTRICTS.

Judicial district.	Township.
Camagüey	Camagüey. Nuevitas. Santa Cruz del Sur.
Morón	Ciego de Avila. Morón.

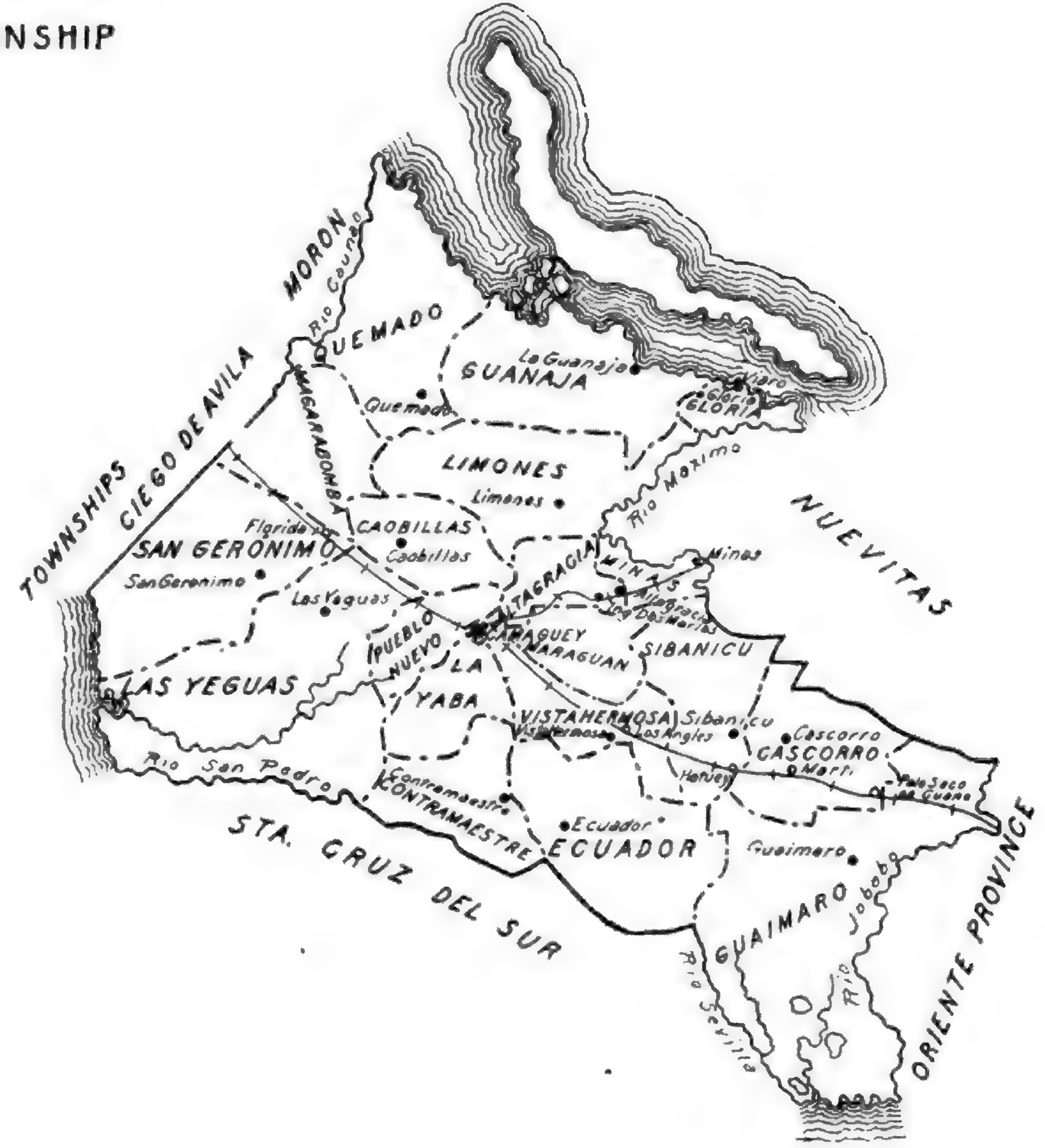
JUDICIAL DISTRICT OF CAMAGÜEY.

Township:	Population.
Camagüey	66,460
Nuevitas	10,620
Santa Cruz del Sur	9,550



TOWNSHIPS
CAMAGUEY PROVINCE

CAMAGUEY TOWNSHIP



TOWNSHIP OF CAMAGÜEY (CAPITAL, CAMAGÜEY).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Camagüey	Primero	Urban		3,992
	Segundo	do		3,694
	Tercero	do		4,063
	Cuarto	do		5,394
	Quinto	do		3,970
	Sexto	do		4,172
	Séptimo	do		2,745
	Octavo	do		1,586
Altagracia	Altagracia	Rural	12.3	1.058
Caobillas	Caobillas	do	15.5	1,842
Cascorro	Cascorro	do	24.3	2,884
Martí.				
Palo Seco.				
Contramaestre	Contramaestre	do	16	2,318
Ecuador	Ecuador	do	22.3	2,239
Guáimaro	Guáimaro	do	51	4,570
Guanaja	Guanaja	do	37	722
Bay View.				
La Gloria	La Gloria	do	36	534
Columbia.				
Viaró.				
Limones	Limones	do	20	1,058
Magarabomba	Magarabomba	do	32	1,484
Céspedes.				
Maraguán	Maraguán	do	12	2,241
Minas	Minas	do	24	2,261
Canet.				
Pueblo Nuevo	Pueblo Nuevo	do	4	2,593
Quemado	Quemado	do	30.7	1,222
San Gerónimo	San Gerónimo	do	30	1,593
Florida.				
Sibanicú	Sibanicú	do	29.5	2,861
Hatuey.				
Vista Hermosa	Vista Hermosa	do	11.1	752
Los Angeles.				
	La Yaba	do	3	1,687
Las Yeguas	Las Yeguas	do	17	2,925

Camagüey.—Barrio and town. The town is the capital of the province. It is situated in the center of the province midway between the north and south coasts in an open country or savanna, 600 feet above the sea. It has an agreeable climate and a good reputation for healthfulness. Divided into 8 wards or barrios.

Being of early foundation, the streets are mostly narrow and crooked, with scant, irregular sidewalks. The principal streets are paved. The plazas Soledad and Dana (formerly Mercedes) are the center of commercial activity, and the radiating points for movements in every direction.

The buildings throughout the city are mainly one-story with tile roofs, and, in the central districts and principal streets, are spacious, with deep patios within. The city is congested. There are no vacant spaces and no unoccupied houses.

Headquarters of the Cuba Company Railroad, which passes west to east, connecting Havana with Nipe Bay and Santiago. It is also the southwestern terminus of the Puerto Príncipe and Nuevitas railroad, connecting the city with its seaport Nuevitas, 45½ miles distant. Thus Camagüey is an important railway center and a distributing point for the province.

The Cuba Company's car shops at Garrido, a suburban place, about 2 miles distant, employ 500 men who live in the city, returning daily.

Besides the railroad, there are 3 lumber mills, 3 large brick and tile factories, several tanneries, slaughterhouse, market, distilleries, and various small manufactories of saddlery and cigars.

The city is the center of the cattle industry, in which many Americans are engaged.

The principal buildings are as follows:

Government administration: Casa Provincial, calle Cisneros, corner San Ignacio; one-story, 200 by 50 feet; used by Spaniards as quarters for engineers. Audiencia, between San Ignacio and General Gómez; three stories, 50 by 50 feet, with one story in patio; used by Spaniards as quarters. Ayuntamiento, corner Martí; two stories, 100 by 50 feet; used in 1899 for department headquarters.

Churches: Yglesia Mayor, Parque Agramonte; isolated, no convent attached, 200 by 100 feet, spacious and well preserved. Mercedes Church, Plaza Dana; convent attached; Spaniards mounted guns on roof and used convent for barracks. Soledad Church, Plaza Soledad, corner República; isolated, no convent. San Francisco Church, Plaza San Francisco; has immense college and convent available for use as barracks, hospital, etc. San Juan de Dios Church, calle San Juan de Dios; has convent, which was used by Spaniards and Americans as hospital; bad condition. San Cristo Church, calle San Cristo and Plaza Padre Gonfaus; no convent; attached to the city cemetery. Santa Ana Church, Plaza Santa Ana, calle General Gómez; no convent. Ursuline Church, calle Carmen between Martí and Enrique José; attached to Ursuline convent, which is cloistered, and is a college for girls. Caridad Church, in suburb of Caridad, 1 mile from center of town; isolated, and no convent attached. San Lázaro Church, suburb San Lázaro, 1 mile from center of town; situated in midst of Hospital San Lázaro; quadrangle used as hospital for aged. San José Church, corner San José and José María; isolated, no convent attached, small and poor. Baptist Church, corner Cisneros and San Ignacio; parish house on calle San Ignacio seats about 50. Methodist Church, calles Avellaneda and San José; small chapel. Episcopal Church, calle República, corner Francisquito; small.

Schools: San Francisco College of Escolapian Fathers, attached to San Francisco Church. Ursuline College, attached to Ursuline Church, calle Carmen. High School, or "Instituto Segunda Enseñanza," calle San Francisco near plaza. Methodist School, calle República near Martí. Several public schools in leased buildings throughout the city.

Prisons: Cárcel or jail, north of city, calle Francisquito, south of Cuba railroad; 200 by 200 feet; isolated; bounded by four small streets; room for 500 prisoners; water from artesian well near Hotel Camagüey. Police headquarters, rear of ayuntamiento, calle Lugardo and Martí; accommodations for about 60 prisoners. Police station, north part of the city, calle Santa Rosa branch; no accommodations for prisoners.

Hotels: Hotel Camagüey, American, north of Cuba railroad track and station; formerly infantry barracks, now headquarters Cuba railway; occupied in part by officers United States Army during second intervention; accommodations for 150. Hotel Plaza, American, calle Avellaneda two stories, large dining hall, accommodations for 40. Hotel Delmonico, American, opposite above; several leased houses under one management, one story, accommodations for 50. Hotel Unión, American, junction of Maceo and Independencia; three stories, 50 by 50 feet, in bad condition, accommodations for 50. Grand Hotel, Cuban, calle Maceo, large, three stories, patio, modern conveniences, accommodations for 75. Hotel Inglaterra, Cuban, Parque Agramonte, three stories, modern conveniences, accommodations for 50. Hotel Central, Cuban, calle Soledad, 50 by 50 feet, one story, accommodations for 25. There are also numerous fondas and boarding houses.

Newspapers, printing: El Camagüeyano, daily; Moderate; calle Cisneros, near San Clemente. Las Dos Repúblicas; Liberal; calle San Pablo, near San Francisco. El Combate; Extreme Liberal; weekly; calle Pobres.

Machine shops: Cuba Company; at Garrido; very large and complete. Nuevitas Railroad, at station; small, but complete.

Horseshoers: calle San Pablo, near Martí. Several small shops on calle República, near station.

Theaters and places for public meetings: Teatro Principal, calle P. Valencia; seats 1,500. Teatro Alhambra, calle San Martín; a hall. All clubs have theaters with stages.

Population, 29,616.

Water supply: There is no municipal system of water supply. Plans have been made to bring water in pipes from the Caobillas Hills, about 15½ miles distant. At present the principal sources of supply are:

(*a*) Rainfall. All private houses have cisterns and tinajones. This supply has generally failed this dry season (April, 1907), and people buy water brought from river and city's artesian wells.

(*b*) River water from Río Jatibonico, a small stream southeast of town. Generally good supply, but in April, 1907, the water is nearly gone; quality is poor; used for washing and for cattle. This water is pumped by steam through a 4-inch pipe to Cuba Company car shops at Garrido, where there are two large tanks, 35,000 to 40,000 gallons each. Water from this river is also used by electric light plant, lumber mills, and partly by ice plant; all situated along the north side of stream.

(*c*) Artesian wells. Several belonging to city of Camagüey, namely, one at market on calle Cisneros, with windmill; one at slaughterhouse, south edge of town, with windmill; one corner Carmen and San Pedro Alcántara, with windmill; one north of town near Hotel Camagüey, two tanks, steam pump, 25,000 gallons; also piped to general hospital and jail. One belonging to Cuba Company Railroad near Hotel Camagüey, steam pump and tank, 55,000 gallons, supplying hotel and American camp. One near by being bored. One near car shops at Garrido. One at American camp on Nuevitas Railroad, 4¾ miles from city; piped but no longer used.

A few private houses and hotels have wells with windmills. Unlimited supply of water can be obtained by driving more of these wells. Surface wells dug 35 or 40 feet will give good supply for camps, but the water would have to be sterilized, which does not obtain with water from artesian wells, it being pure.

No sewer system. Houses have cesspools. A custom is permitted of throwing wash water in the streets at night.

The city is well lighted by electricity, the electric light plant being situated on edge of river at foot of calle Soledad. The power is supplied by two Mansfield engines of 220 horsepower each, which supply the current for four circuits, lighting the entire city. A new turbine engine, doubling the power, is in contemplation. Poorer houses and suburbs use oil and acetylene for illuminants.

Barracks: An entire list of all buildings suitable in military emergencies for barracks would necessitate the enumeration of hundreds of buildings. The following list contains descriptions of those that appear to be most important.

Temporary barracks built by American soldiers, situated 500 yards northeast of Camagüey Hotel on leased land. They are plain, unfinished pine buildings, with corrugated iron roofs; are well built and comfortable. Their descriptions are as follows: One administration building, 140 by 22 feet, containing offices, guardhouse, library, etc. Five sets of quarters, 140 by 22 feet; one for each company. Five kitchens and mess halls, 50 by 20 feet; one for each company; each has running water. One bath house, 14 by 28 feet. One bakehouse, 14 by 20 feet; running water from artesian well of Cuba Railway; excellent. Two stable corrals, one 140 by 19 feet, and the other 100 by 19 feet; two large wells; water good and ample. Four incinerators, 16 by 16 feet. Land is available for increase of this post.

The following buildings were used for barracks by Spaniards, and by Americans during first occupation: Hotel Camagüey, 300 by 360 feet, with large patio; situated north of Cuba Railroad; has immense cistern and is piped throughout; modern water-closets; artesian well, with steam pump, near railway; was occupied during first American intervention by a full regiment; now leased by Cuba Company Railroad for twenty years. General Hospital; originally an infantry barracks; model similar to above, 360 by 300 feet; quarters for full regiment; running water; tank on roof supplied from artesian well near railroad; modern water-closets and baths. Audiencia; three stories; used as a barracks by Spaniards and as hospital by Americans; large patio and cistern with windmill; no sanitary conveniences for large numbers, but would make barracks or quarters for a battalion. Casa Provincial; Cisneros and San Martín; one-story; has a cistern; formerly barracks for Spanish engineers; accommodations for two companies.

Besides the foregoing, the American troops also used the Sánchez house, 9 calle Cisneros; two stories; modern improvements; used for offices of chief quartermaster and commissary. Several private dwellings of good size on calle Avellaneda, near San Francisco church, were used for messes and isolated companies.

In addition there are a number of convents, clubs, and private houses which would be available in emergency, viz, convents: San Francisco, Plaza San Francisco, a regiment; Mercedes, Plaza Dana, a battalion. Clubs: Sociedad Popular, calle Popular, a battalion; Martí, calle Martí, a battalion; Unión, calle Calixto García, a battalion; Veteranos, calle J. Aguero, a battalion; Fenix, a battalion; Liceo, Plaza Agramonte; Liga Agraria, Plaza Agramonte; Colonia Española, calle Cisneros; the last three named could be utilized for department headquarters, offices, etc. Private houses: calle República, south from calle San Estéban; calle Avellaneda, east side to Soledad and San Francisco church; calle San Francisco, corner República, now used by rural guard; calle San Francisco, large house on plaza facing church; calle Martí, No. 39 and vicinity; calle Cisneros, from Plaza Dana, south to San Clemente; calle Lugareño, No. 72, two stories; calle Lugareño, Círculo Liberal, corner Martí.

Temporary shelter for troops could be had as follows: Lumber mills, near Camagüey Hotel, 300 men; has cistern water. Lumber mills of Molina, calle Soledad, near electric-light plant; not so good; 200 men. Lumber mills of Camagüey Lumber Company, 200 men; spur track near; water obtained from artesian well. Casino Campestre; a large open building, 200 by 60 feet; brick floor; used for exposition purposes; needs repair.

Stables: There is very little stable accommodation in this cattle country, private stables being few and small. The following are the largest: Public stables adjoining yards of Nuevitas Railroad near Hotel Camagüey; convenient to transportation; artesian water tanks; accommodations for 50 to 150 horses. Cann's old stable, back of Plaza Hotel; 25 horses; could increase to 200. Casino Campestre; large building, 200 by 60 feet; 100 horses. Polvorín, rural guard station, near San Lázaro, 1½ miles west from town; suitable for 50 horses.

Corrals: Present camp north of Hotel Camagüey; artesian water; two wells; 40 acres; pasturage; 600 yards from Cuba and Nuevitas Railroads. Casino Campestre, southeast of city; 1,000 yards from Cuba Railroad at its car shops, where there would be a good opportunity for entraining and detraining; this is near the race track of the city; good grazing. Small corrals near Cuba Railroad station (Cann's stable); no water. Small corrals in yards of Nuevitas Railroad; water would have to be piped from near-by tanks.

Hospitals: There are established hospitals, and buildings that could be made immediately available, with capacity sufficient to accommodate nearly 2,000 patients.

Numerous residences could be readily converted into quarters for the sick. The hospitals and some of the buildings are as follows:

American army hospital, one-quarter mile northwest of camp and one-half mile from railroad station, with which it is connected. Leased, double building, 70 by 30 feet; tile floor; one story with portico; large patio; no modern closets; cistern; artesian water from camp used; accommodations, 30 patients and corps men. Another similar house opposite; available in case of military emergency.

General hospital, situated on open ground, northeast corner of city, opposite stations of Cuba and Nuevitas Railroads. A large building, 300 by 350 feet, inclosing patio. Central part of front building is two stories and used for nurses. The building was erected by Spaniards for infantry barracks; was afterwards used by them as a hospital. Used by

Americans as a barracks for 1,000 men, and again by Cuban Government as a hospital. Spaniards crowded 2,000 patients into the building, but the proper capacity is about 500. Has long wards on sides, private wards in front, and kitchens in rear. Water supply pumped from city artesian well, near Hotel Camagüey, into tank on roof; good and ample; building has modern water-closets and bath. Building was renovated during first intervention; needs some repairs (1907).

San Lázaro; public institution; home and hospital for aged poor. One mile west of town on Havana road, in suburb San Lázaro. Quadrangular building; one story; male and female wards on opposite sides of patio; cistern; artesian well; windmill; baths and modern water-closets; a model institution. Has about 100 patients; could accommodate easily 300 or more.

College of San Francisco. Available for hospital or barracks, about 250 by 300 feet, inclosing patio; two stories; cistern; well; windmill; modern water-closets, and good baths; could accommodate 500 patients.

Hospital of Colonia Española, southeast of city. A house near Casino Campestre; a two-story stone building with balconies, 60 by 60 feet, and has an azotea. A private hospital for Spaniards; 20 patients; could accommodate 100. A good isolated hospital for contagious diseases; cistern; well; modern water-closets; bad condition.

Convent of San Juan de Dios, in plaza of and adjoining church of same name. Two stories; patio around cistern; used by Americans during first intervention. Was originally a hospital; now rented to poor people, and is in a very dilapidated and dirty condition; would require great expense and labor to make necessary repairs; cistern is dry and dirty; no conveniences.

Audiencia, calle Cisneros, now the court-house. Used by Americans during first intervention. Has ward for contagious diseases. It is of little value to-day, except in case of special necessity. Has well, windmill, modern water-closets; could accommodate 200 or more.

El Carmel, infant asylum, San Juan Nepomuceno, corner calle Martí and Bembeta.

Quartermaster and commissary storehouses: Present storehouses (1907) in rear portion of Camagüey Hotel. The commissary storehouse is 60 by 20 feet, and the quartermaster storehouse is 40 by 30 feet. Other suitable locations are: Freight station, Nuevitas Railroad; 2 storehouses, 150 by 25 feet each, with platforms. Freight station, Cuba Company; small and needed for railroad business. Cuba Company car shops at Garrido, 2 miles east; a large number of tracks; 2 large buildings, about 100 by 40 feet each; no platforms. Camagüey Lumber Company; 2 large buildings; spur track; no platform. Large storehouse, No. 39 calle Martí. Distillery of Pufan Company, corner calle Lope Recio and San Estéban.

Location of principal offices: Post-office, Plaza Dana, center of city. Telegraph office, Plaza Dana, center of city; in post-office building. Railroad telegraph office of Cuba Company, opposite station. Telephone central, calle Cisneros, near Plaza Agramonte. Electric-light office, calle Cisneros corner San Ignacio.

Ice plant: Situated in northeast part of city, one-half mile from railroad and off road to Nuevitas on edge of Jatibonico River. Only machine in district; ships ice to Nuevitas, etc. Product limited; water from stream and wells; distilled.

Camp site: Present camp (1907), battalion Seventeenth Infantry, 500 yards northeast of Camagüey Hotel; 40 acres pasturage; water from two wells and piped artesian water from Camagüey Hotel; additional capacity for a regiment; connected with railroad one-fourth mile away by macadam road. Casino Campestre, southeast of town, zoological gardens, and race track on Jatibonico River and Arroyo de Toro; plenty of water of fair quality; one large open building, 200 by 60 feet, with tile roof and brick floor. Along line of Nuevitas Railway, 2½ miles from town; creek; large force. Along line of Nuevitas Railroad, 5 miles from town; artesian well; large force; this was the camp of the Eighth Cavalry during the first intervention; formerly contained many frame buildings, since sold, removed, and rebuilt by a colony of Americans between Caridad road and Garrido.

Defenses: La Punta de Diamante; redoubt; southeast of town on Caridad road; dismantled; occupied by rural guard.

El Polvorín (magazine); west 1½ miles on Havana road; dismantled; occupied by rural guard. El Cerro; abrupt hill, three-fourths of a mile west on line of railroad; line of old trenches.

Railroads: Cuba Company Railroad passes through north part of city from west to east. Puerto Príncipe and Nuevitas Railroad; terminus north of city; runs northeast. These two lines comprise the local transportation. The Cuba Company has covered platform 300 feet long for passengers and one about 200 feet in length for freight; two tracks with three spurs comprise the local switching facilities; one spur, three rails, connects with yard of Nuevitas Railroad; one spur enters lumber yard of Camagüey Lumber Company. At Garrido, 2 miles east of town, are the car shops of the Cuba Company, with a system of tracks having capacity of several hundred cars; roundhouse; 2 large buildings, 75 by 40 feet; two water tanks; near race tracks and park camp sites, etc. This plant is being increased.

Roads leading out of town: To the north runs the Vigía road, which 1 mile out of town divides into three, viz: The northern Havana road, the Morón road, and the La Gloria road. To the northeast, following the Nuevitas Railroad, runs the Nuevitas road. The Garrido road runs to Las Cuevas and Minas. To the southeast runs the Caridad road to Santiago; 18 miles of this road is macadamized. To the south runs the road to Santa Cruz and to the west runs the southern road to Havana. All these roads have branches which lead in every direction.

The best line of approach to the town is from the north and northeast. The country is open and unobstructed savanna. At this end of the town are the vulnerable points, viz, the car shops and depots. West of the town there is wooded growth and a hill, El Cerro, which could be easily fortified.

Altagracia.—Barrio and village. Village is about 12 miles northeast of city of Camagüey along the Puerto Príncipe and Nuevitas Railroad. Contains 16 houses and 2 stores. Population, about 100. People are engaged in raising cattle and there is a molasses mill, Las Dos Marías, about 1 mile southwest. Water is obtained from wells and cisterns; supply poor. Railroad station and telegraph. No telephone. Railroad siding of 75 yards at station.

Roads: North, logging roads. Southwest, fairly good road over savanna to Camagüey. East, Camino de Camaján; fairly good road toward Minas.

Caobillas.—Barrio and sitio. The sitio is 15½ miles by road northwest of the city of Camagüey, and consists of 3 houses of native construction.

Cascorro.—Barrio and village. The village is about 2¾ miles northeast of Martí station, and 24.3 miles by road southeast of the city of Camagüey. An old historic village with a prosperous past; burned three times. Level land; two or three cross streets; all small houses except one, which is a large brick store centrally situated. Population, about 1,000. Water supply obtained from river, which runs along northwest corner of village, at crossing of road leading to Sibanicú. Rain water is also used. Buildings that could be used for barracks are a club, with a capacity of possibly 40 men, and a schoolhouse which might hold 50 men; neither has sanitary arrangements. Post-office and telegraph office on northwest corner of principal street. On Sibanicú road, adjoining river, a large force could be camped. Open space also available north and south of village, a few hundred yards from river. There are two fine, fenced pastures on the north side of river. Roads leave the village from the north to Sibanicú and Nuevitas; from the south to Guáimaro and Martí station (in bad condition). There are woods to the east and west of village, and open country north and south.

Martí.—Village. Situated on the main line of the Cuba Company Railroad, 37 miles southeast of Camagüey, in the center of a rich grazing country. Population, about 700. The water supply is obtained from the railroad tank, and is limited. There is a large cattle corral, water for which is pumped from a well at Cascorro. The sugar mill Tana is about 4 miles south, and a spur of the railroad runs to it. There is a Y at Martí. The nearest running stream is 4 miles distant. Telegraph office at railroad station. Roads lead north to Cascorro and south to Guáimaro. The country surrounding the village is open. There is said to be a great deal of malaria at this point. The Cuba Company Railroad plans to build a branch road from Nuevitas to Martí.

Palo Seco.—Village. Formerly called Guano. Situated on the Cuba Company Railroad, east of Camagüey. Consists of 2 stores, a frame schoolhouse, and a number of houses of native construction. There is a post-office, telegraph office, and a railroad station. Switch of 22-car capacity, with pens and ramps for loading stock. To the east and south the country is level and clear to the woods, which are distant 600 yards. On the west and southwest there are woods within 100 yards of the station.

Contramaestre.—Barrio and sitio. The sitio is 16 miles south of the city of Camagüey, and consists of a few houses and a store.

Ecuador.—Barrio and sitio. The sitio is on the Río Najasa, 22.3 miles by road east of south of the city of Camagüey. It contains a cantina. A new steel bridge is being constructed over the river at this place.

Guáimaro.—Barrio and village. The village is situated in a level basin, surrounded by low, grassy hills, and is 51 miles by road southeast of the city of Camagüey. It contains about 100 houses, a few of which are of rubble masonry and the rest native construction. It is a rural-guard station, and has a post and telegraph office. The Guáimaro River flows 200 yards northeast of the village and supplies it with water of excellent quality. There are wells also. A masonry bridge is being built over the river on the Victoria de las Tunas road, which leaves the village on the northeast. The Palo Seco road leaves the village to the north, the Cascorro road to the northwest, the Guayabal road to the southwest, and the La Loma road to the southeast. Just outside of village the Jobabo road forks to eastward from La Loma road. A road to the Finca Jagüita leaves village to the east.

Cattle ranches surround the village on all sides, and there are barbed-wire fences coming within several hundred yards of the buildings. About 1,000 yards to the northwest there is a hill about 150 feet high, and another one about same height 1,200 yards to the southwest. The timber line crosses the crest of these hills, but the faces toward the village are practically clear. Between these hills are two low grassy hills several hundred yards apart. From the crest of the southwest hill the Cuban army, under Calixto García, Máximo Gómez, and Antonio Macéo, shelled the Spanish troops out of their blockhouses and redoubts that encircled the village and compelled their surrender.

There is a cemetery about 500 yards west of the village. It is a quadrangle surrounded by a brick wall 6 feet high and 18 inches thick, with faces about 75 yards long. Light woods extend from the foot of the hills southwest to within 200 yards of cemetery. The ground between cemetery and village is clear of brush and trees and is level.

Under protection of fire of field artillery, or even machine guns, posted on crest of hill to southwest, or hill to northwest, infantry could approach the cemetery wall under cover of woods. East face of cemetery wall affords clear field of fire to west and south of village.

The north and east faces of the village are enfiladed perfectly from crest of hills 500 yards northeast of the village. Light woods approach village on east and south within 300 yards. Under cover of these, dismounted troops could approach. The village could not be successfully defended unless the defenders were secure on the surrounding hills. As defended by the troops of Spain, the place was a trap. Having captured the village both in the Ten Years' war and in the war of 1898, the Cubans say that a Cuban army will always be successful at Guáimaro.

Guanaja.—Barrio and village. The village is 37 miles northeast of the city of Camagüey. It is a fishing village and contains 40 houses of native construction, a frame schoolhouse, two frame warehouses, and three wharves.

Five feet of water at end of wharves at low tide. Tide of 1½ feet. Average depth of water in bay, 6 feet. Entrances to bay: Guabaja and Carabelas channels; former is at west and latter at east end of island of Guabaja. Deep-water and sea anchorage at north end of Guabaja Channel. The transportation in the bay consists of sailboats of 2 to 10 tons capacity and steamboat *La Gloria.*

Bay View.—Sitio. A town site situated half a mile south of Guanaja and containing a three-story frame hotel, built to accommodate Americans interested in the Columbia, La Gloria, Pilota, Garden City, and Palm City colonies. The building contains 20 rooms, 10 by 12 feet; completely furnished; iron bedsteads, mirrors, tables, chairs, bedclothing, etc. Kitchen and table furniture for about 50 persons. Good well in yard and another in cocoanut grove 100 yards north. Elevation about 70 feet. Ground cleared and perfectly drained. Healthful site. Plenty of fuel and forage in immediate vicinity. Excellent quarters for detachment of 40 to 60 men. Detachment could supervise all country between Cubitas Mountains and north coast, and along the coast from Columbia to the mouth of the Río Pedro; also Cayo Romano, Guabaja Island, and the western end of the Sabinal Canal.

La Gloria.—Barrio and village. The barrio contains, besides the colony of La Gloria, the sitio of Viaró and the village of Columbia.

The village is the town site of a large American colony and is 4 miles southwest of Viaró, its port, and 39½ miles by road northeast of the city of Camagüey. Wells constitute water supply, which is good. There are from 40 to 50 small frame houses in the village proper, and as many more scattered about outskirts; one two-story frame building owned by the Fruit Growers' Association, and four general stores. There is a post-office, but no telegraphic or telephonic communication. Population, about 500.

Road to Camagüey passable at all seasons; to Nuevitas, 32 miles, impassable in rainy season; trail to Guanaja, which can be used by pack trains at all times and by wagons in dry season.

Water route to Nuevitas is by sailboat from the landing in bay No. 1, through Sabinal Canal, taking steamer at west end of canal. Actual time from Nuevitas to Viaró is about ten hours.

As a base station for a detachment of troops this point does not compare favorably with Guanaja, Pilota, or Columbia.

Columbia.—Village. An American colony on coast, 5 miles east of Viaró. Steamer *La Gloria* lands at dock. Village is on the beach and 200 to 500 yards from sea. Two-story frame hotel with 16 rooms. Twenty frame houses, 4 to 8 rooms each; all practically new. Water is hauled from Máximo River, distant 1 mile. Several good wells in village. Place practically deserted. Houses were built by Americans who purchased fruit lands in vicinity. The first year demonstrated that nearly all of the farms were flooded during the wet season and caused the majority of the settlers to abandon their property and move elsewhere.

Viaró.—Sitio. Situated on the coast, 39 miles northeast of Camagüey. It is the seaport of La Gloria, which is 4 miles southwest, and is connected with that place by a macadam road. It consists of a frame warehouse, 30 by 50 feet, with a wharf 300 feet long running out from it. This wharf is to be extended to 6 feet of water. There is also another warehouse projected to connect with the present one. (November, 1907.)

There is no fresh water available within 2 miles. The steamer *La Gloria* gets its supply from rain water caught on board and from spout on the warehouse. When more is wanted it must be obtained from the Máximo River.

Limones.—Barrio and sitio. The sitio is 20 miles east of north of the city of Camagüey, and consists of 3 houses of native construction.

Magarabomba.—Barrio and sitio. The sitio is about 32 miles northwest of Camagüey and consists of 3 stores and 5 native houses. There is a large slough at which stock can be watered. Roads branch to Ciego Corojo and Morón. This barrio contains the village of Céspedes.

Céspedes.—Village. A railroad settlement 26 miles northwest of Camagüey on Cuba Company Railroad. It consists of a number of scattered houses along the railroad, a railroad station, section house, sawmill, and store. There are about 50 people in village and they are occupied in cutting and shipping timber. Water supply is from wells; scant and and poor. There is a railroad telegraph station and a siding of 100 yards. Logging roads lead north to Candelaria and south to San Gerónimo; both connect with national highways at points named.

Maraguán.—Barrio and sitio. The sitio is 12 miles southeast of the city of Camagüey and consists of 1 cantina and 3 houses.

Minas.—Barrio and town. Besides the town of Minas the barrio contains the village of Canet.

The town is 24 miles northeast of the city of Camagüey, on the Puerto Príncipe and Nuevitas Railroad, and is a junction for a narrow-gauge railroad running 5 miles north to ingenio Senado. There are no manufactures and but little agriculture, the principal industry being the raising of cattle and the distribution of supplies. There are copper mines in the vicinity, but they are not being worked.

The town is on the north side of the railroad and is divided into two parts by a vacant space owned by railroad company. The old town, east, contains business stores. The streets are at right angles. There are over 200 small, one-story houses, 26 stores, 3 hotels, and 1 slaughterhouse. Population, 1,387.

Water is obtained from wells and is of good quality and abundant. Two arroyos, east and west, fed by springs, are also used, and the water is good.

No sewer system. Petroleum used for lighting in homes. Acetylene used in stores.

For barracks there is an old sugar mill on the north edge of the town, 90 by 110 feet, which will shelter 200 troops, and water can be obtained from good wells, tanks, and arroyo. It was occupied by Spanish troops at the close of the Spanish régime.

Telegraph offices at railroad station and in post-office. Private telephone to Senado. Post-office on calle Moralista.

Railroads: Facilities for entraining and detraining are excellent. Good storehouses. Station platform level with floor of cars; inclined plane for horses. Sidings for 50 cars; 2 water tanks, 500 and 1,000 gallons, respectively; water obtained from wells.

Camp sites: Two miles west, opposite Canet station, there was an infantry camp during first American intervention; one battalion; water from Spanish well and arroyo. One mile south on hill overlooking town; one squadron of cavalry camped here during first intervention; water from springs.

There are no existing defenses. Spaniards entrenched a hill to the south.

Roads: Main road Camagüey to Nuevitas passes through town. There is a road northwest to La Gloria and one south to Riverside.

Town is dominated by hills to south and a range of hills north and northwest, the possession of which determines the tenableness of the town.

Canet.—Village. This village is a small American colony situated about 18 miles northeast of Camagüey, on the Puerto Príncipe and Nuevitas Railroad. It consists of about 27 houses, mostly small homes built on the bungalow pattern, and a large two-story house, used as hotel. Water is obtained from a large well. Surrounding country open and flat. Battalion of infantry camped here during first intervention.

Pueblo Nuevo.—Barrio and sitio. The sitio is 4 miles from the city of Camagüey. It consists of a store and two houses of native construction.

Quemado.—Barrio and sitio. The sitio is 30.7 miles by road northeast of Camagüey on highway leading north from that town; near the Jigüey River. It consists of a finca with a large new house.

San Gerónimo.—Barrio and village. The barrio contains, besides the village of same name, the village of Florida. The village is 30 miles west of Camagüey by national highway, and consists of 50 houses, 2 schoolhouses, and 2 well-stocked stores. Principal industry is cattle raising. Population, about 250. Water supply is obtained from wells about 25 feet deep. Supply inadequate in dry season, and no large body of troops could be supplied.

Telegraph station of government line to Camagüey and Ciego de Avila. Post-office on plaza. The schoolhouses are one block from the plaza.

Road out of the village northwest to Havana; trails and road north to Céspedes, and a national highway southeast to Camagüey, 30 miles.

Florida.—Village. A railroad and lumbering settlement similar to Céspedes and situated about 21 miles northwest of Camagüey. Contains 2 sawmills, 2 stores, and a short siding. Logging roads running north and south connect with the national highways.

Sibanicú.—Barrio and village. The village has about 600 inhabitants, and is 29½ miles by road southeast of Camagüey; built along the Camino Real to Santiago. Contains 12 stores, 2 schoolhouses, and a good club building.

The water supply is obtained from wells and from the two streams which pass by the edge of the village. The quantity is ample and the quality is said to be good.

Petroleum is used for lighting.

The two schoolhouses and the clubhouse would be available for barracks in an emergency. They are clean and in good condition, but have no sanitary arrangements.

There is open ground for corrals on bank of river, 300 yards from the village.

The clubhouse contains one large, spacious room and could be used as a hospital; no sanitary conveniences.

Some of the stores in village are the only buildings suitable for storehouses.

Telegraph line passes through the village, but there is no telegraph office. Telegrams are sent from Hatuey, 4 miles south on the Cuba Company Railroad.

There are plenty of good camp sites. One can be found on banks of stream 300 yards from village.

The nearest railroad point is Hatuey, 4 miles south on Cuba Company Railroad.

Roads leading out of village: North to San Miguel; southeast, Camino Real to Santiago; south to Hatuey; north of west, Maraguán road to Camagüey; east, carretera to Camagüey. With the exception of the last-mentioned road they are generally poor.

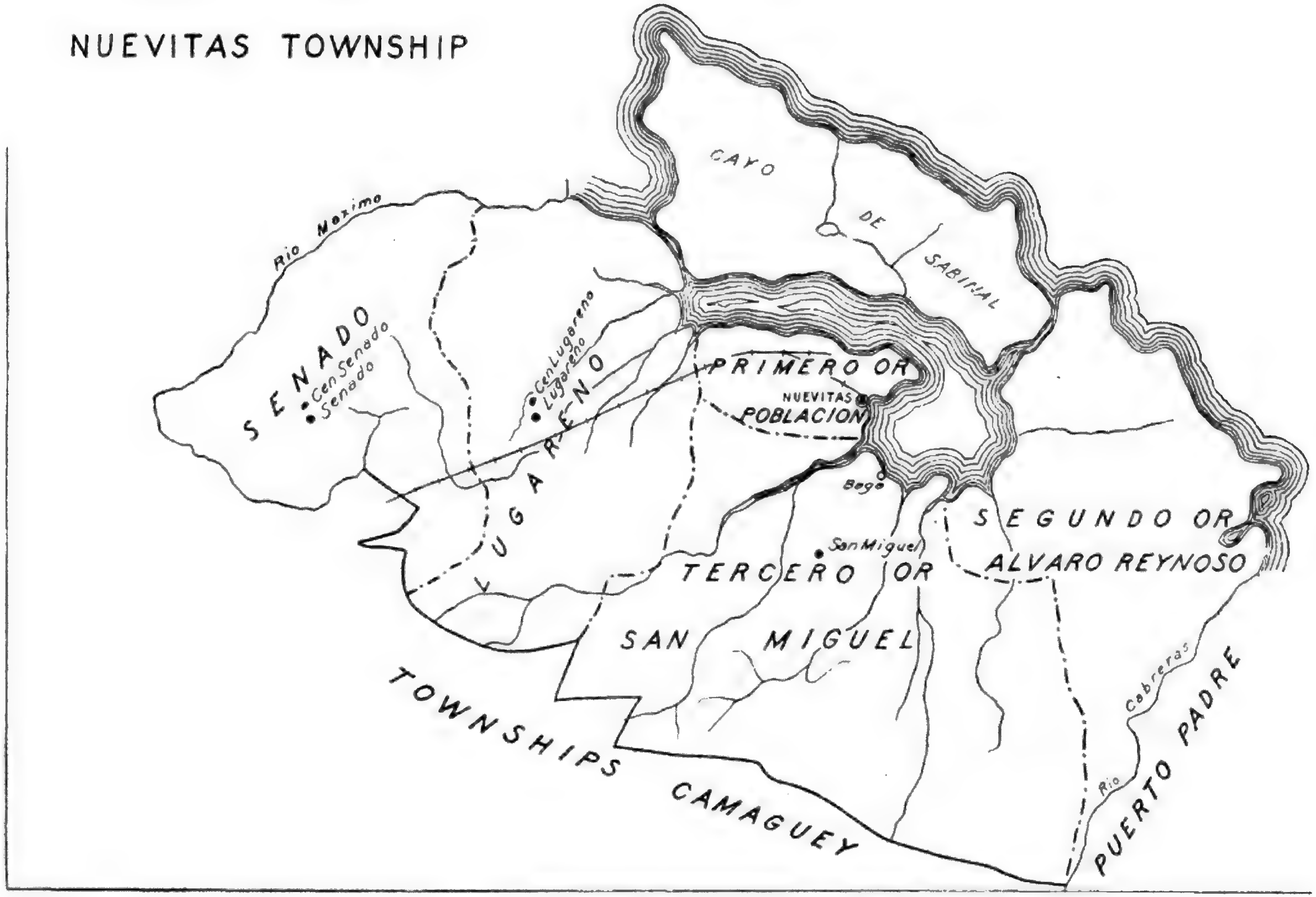
Hatuey.—Sitio. Situated on Cuba Company Railroad, 29 miles southeast of Camagüey and 4 miles southwest of Sibanicú. Consists of a sawmill and a few houses. Railroad station for Sibanicú.

Vista Hermosa.—Barrio and sitio. The barrio is a rural district southeast of Camagüey. The sitio consists of a store on Camagüey-Santiago road, 11.1 miles from Camagüey.

Los Angeles.—Sitio. This place is the railroad station of Vista Hermosa. It is about 14 miles southeast of Camagüey at junction of Cuba Company Railroad with Camagüey-Santiago road. There are 2 general stores and a few scattered houses. It is also called Ignacio.

La Yaba.—Barrio. A district lying 3 miles south of Camagüey and containing the finca San Juan de Carbonero and 1 store.

NUEVITAS TOWNSHIP



Las Yeguas.—Barrio and sitio. The sitio is 17 miles west of Camagüey and consists of 5 houses of native construction.

TOWNSHIP OF NUEVITAS (CAPITAL, NUEVITAS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Nuevitas	Población or Primero	Urban and rural.		1,273
	Álvaro Reynoso, or Segundo	Rural	17.7	1,767
Lugareño	Lugareño	do	19.2	2,196
San Miguel Bagá.	San Miguel, or Tercero	do	12	1,346
Senado	Senado	do	24	3,026

Nuevitas.—Barrio and town. The barrio is called Población. The town is on the northeastern shore of the bay of the same name, and is really the only seaport on the northern coast of the province, being connected with the United States and Cuban ports by several steamship lines; is the seaport of Camagüey, the capital of the province, situated about 45 miles west by south, and is connected therewith by the Puerto Príncipe and Nuevitas Railroad.

Trains run once daily in each direction between Nuevitas and Camagüey at irregular hours. This service is increased when the amount of merchandise to be transported demands it. The Munson Steamship Line affords transportation to New York bimonthly and the Herrera Steamship Line serves for communication with Havana and points along the Cuban coast.

The harbor is one of the largest in Cuba. It is approached through a narrow entrance. It is shallow near the shores, and vessels of heavy draft anchor a mile or more from the town. Wharves are numerous and smaller vessels find easy and ample dock facilities with extensive warehouses. On the points at the entrance to the harbor are the lights "Punta de Maternillos" and "Punta de Prácticos," and in the midst of the bay are the islands which, owing to their resemblance to a school of whales, are known as "Los Ballenatos."

The town is situated on the side of a slope running from the shore and terminating in an eminence, on which is situated the plaza or town square. The streets are wide and well kept and are laid out in large rectangles, the principal streets following the shore line. The town extends along the water front for about a mile.

Most of the inhabitants are engaged in pursuits of local interest, and there are no industries of importance, although there are three tanneries and a henequen works near the outskirts of the town. Some sponge and tortoise shell fishing is engaged in. The sugar from the Senado and Lugareño mills, fruits from La Gloria and other American colonies, and lumber from the surrounding country are exported.

The population is 4,386.

The fresh-water supply is derived solely from stored rain water, collected from roofs and watersheds. There is no municipal water system. Near the railroad station is a large cistern which collects water from the hillside, and from which pipe has been laid to the beach, and vessels may obtain water from this source. In general the fresh water is of good quality throughout the city. No history of epidemics of typhoid, dysentery, or enteric diseases. With the exception of small lagoons nearly a mile from the port along the Camino Nuevo, there are no reserve supplies of fresh water.

There is no sewer system. Drainage is entirely on the surface of the ground, which slopes down to the beach. Dirt closets and privies are in general use throughout the city. None of the buildings or dwellings are piped for water, and there are no modern water-closets in use.

Electricity, oil lamps, and candles are used for illuminating purposes. The electric plant is unsatisfactory because of its insufficient power. It is a private enterprise, and is not controlled by municipal authority. The plant is on calle Independencia, near the bay.

The two barrack buildings, which were constructed by the United States Army during the first intervention, are in fairly good repair and available for the use for which they were constructed. These barracks are on elevated ground, are cool, and their sanitary condition, as well as that of their surroundings, is good. These quarters would accommodate 200 men. Water is obtainable at the barracks from near-by cisterns, although the amount is comparatively limited and requires transportation. There is rentable cover in warehouses along the water front for 300 men. There are a few very small stables.

Near the railway station is a small corral with water supply. In the environs there is open ground suitable for corrals, but with uncertain water supply.

The town maintains no hospital. Some of the better dwellings might fulfill the requirements of an emergency hospital. The lack of proper sewerage, water-supply system, and plumbing would be deterrent factors in considering these houses for hospital purposes.

The large warehouses adjacent to the wharves are suitable for both quartermaster and commissary usages. One of them was so utilized during the first American intervention. These buildings are commodious, and have direct communication with sidings from the Puerto Príncipe and Nuevitas Railroad freight yards. Flat cars carry freight from the wharves within the buildings on tramways. Unloading platforms extend across the warehouses on either side of tramway.

The railway station is on calle de Lugareño. The post-office, telegraph office, and telephone central are situated on the corner of calle Ignacio Agramonte and calle Joaquín Agüero.

NOTE.—The names of the streets were changed after the Spanish-American war; consequently maps of the city of earlier dates are misleading in this respect.

There is no ice machine. Ice is brought daily from Camagüey by rail.

There are several good camp sites just without the thickly populated districts. Wood is obtainable in the vicinity as well as grazing ground, but water would have to be transported to the camp sites.

No defenses.

The railway freight yards and sidings are placed between the station and the bay. They cover an area which it is estimated would suffice for nearly a hundred freight cars. The facilities for entraining and detraining are fairly good. Within the station is a large storeroom fully 100 feet long. There is also considerable platform space.

The roads leading from the town are poor, with the exception of the Camino Nuevo, which, for about 5 miles, is in fairly good condition. This is the most important road; all other roads are for local traffic and unsuitable for teaming. The Camino Real leads to Camagüey, but becomes practically a trail at a point 5 or 6 miles from Nuevitas, at which point there is a branch wagon road to the eastward leading to La Atalaya and San Miguel.

Landing parties should land in, and attack from, Bay No. 1, which is west of Nuevitas Harbor. An attack by land should be made from the southeast.

Álvaro Reynoso.—Barrio. A rural district west of Nuevitas. No point bearing the name in the barrio.

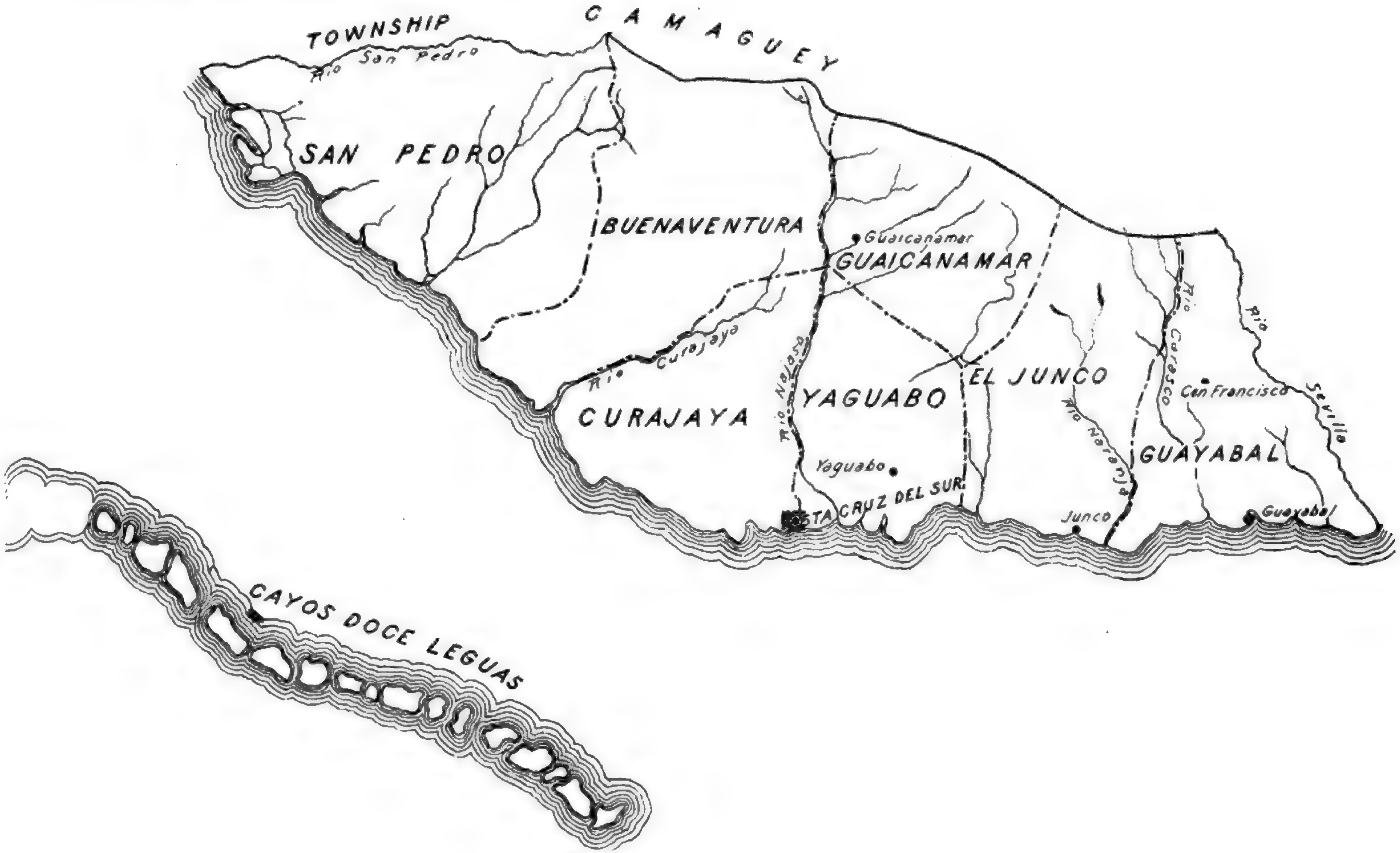
Lugareño.—Barrio and village. The village consists of the central Lugareño and its buildings and people employed therein. It is 2 miles north of the Puerto Príncipe and Nuevitas Railroad. There is a station on the railroad 10 miles west of Minas, but no settlement.

San Miguel.—Barrio and village. The American colonies, Riverside and Atalaya, are in this barrio; also the sitio of Bagá and some smaller places. The village of San Miguel is about 10 miles south of Nuevitas, and consists of 3 stores, a bakery, schoolhouse, rural guard station, and about 60 houses. There are also the ruins of an old sugar mill. Water is obtained from wells and cisterns. Telephone connection with Bagá. The village is the terminus of a proposed railroad from Guáimaro, and is connected with the sea by an old railroad running to Bagá. There are roads running from this village north to Nuevitas, south to Palo Seco, on Cuba Company Railroad, west to Minas, and east to Santa Rosalia.

Bagá.—Sitio. On Nuevitas Bay 5 miles directly south of Nuevitas. It consists of 6 houses, a tannery, and a large warehouse with tramway. Population about 30. The warehouse and tramway is what is left of the old village of Bagá, which was burned during the Ten Years' War. Railroad and telephone connections with San Miguel. There is a wharf extending 450 feet into the bay, and the tramway runs on it to the warehouse.

Senado.—Barrio and village. Central Senado is in this barrio. The village is 24 miles west of Nuevitas and 3½ miles

STA. CRUZ DEL SUR TOWNSHIP



north of Minas, and consists of the central Senado, with its buildings and people employed therein. It is connected with Minas by a narrow-gauge railroad.

TOWNSHIP OF SANTA CRUZ DEL SUR. (CAPITAL, SANTA CRUZ DEL SUR.)

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Santa Cruz del Sur	Calzada	Urban		1,041
	Playa Bonita	..do		599
	Buenaventura	Rural	28	1,107
Curajaya	Curajaya	..do	14	341
	Doce Leguas	..do	56	93
Guaicanámar	Guaicanámar	..do	21	1,224
Guayabal	Guayabal	..do	36	3,081
Junco, or Guano Alto	Junco, El	..do	23.3	904
Buenaventura	San Pedro	..do	22	416
Yaguabo	Yaguabo	..do	5.5	744

Santa Cruz del Sur.—Town. The town is divided into the urban wards or barrios Calzada and Playa Bonita. It is 48 miles due south of Camagüey city. It is built along one street on a bar of coral and sand that follows the curve of the beach. The bar is about 4 feet above high water, 100 feet wide, and 2 miles long. There is a salt swamp in the rear. The bar widens a little at its eastern end, allowing a second street north of the main one. During the spring tides the town is inundated, even the one road that leads out of the town being covered with water. The people are engaged in the shipment of logs and lumber, a great deal of cedar, mahogany, and other hard woods being handled. Twenty-four million feet were shipped in 1906. There is a sawmill at the west end of the town.

There is no harbor, simply an open roadstead. The shore line is fringed with basins or corrals for the retention of floating timber. At about midway of the length of the town is a wharf 800 feet long, at the end of which there is 11 feet of water. There is also a small wharf near the west end of town. Steamers of the Herrera Line stop twice a week each way. Foreign vessels anchor half a mile from the shore to load, the logs being rafted and towed out by a small steamer.

Population, 1,640.

Water supply: Rain water gathered in tanks above the ground, and the Najasa River, 6 miles distant. The water from the river is pumped through a 3-inch pipe into a tank made of wrought iron, 5 by 6 by 9 feet, the bottom of which is elevated about 8 feet above sea level. It is said the pump can fill this tank in five hours. The tank is about 400 yards east and 65 yards north of the shore end of the large wharf.

There is no sewer system. Kerosene is used for lighting. A few houses have acetylene gas.

Buildings suitable for barracks: Next to and east of the sawmill is a one-story wooden building with tile roof, 250 by 40 feet. East of this are 4 wooden houses, 150 by 40 feet. These buildings were constructed for the Spanish troops and were used as barracks; they are in good condition. Flurach & Co. are the owners. From the small wharf of Flurach & Co. to the large wharf where the steamers dock there are 11 buildings, similar to the ones already described. There are 34 more frame houses, from the large wharf east to where the road to Camagüey leaves town. From this point eastward houses of native construction are the rule.

In the town there are 2 hotels, 18 general stores, 2 drug stores, a church, and about 300 houses.

There are no stables or shelter for animals, and there is no watering place for them. A corral on the north edge of the town, now used by the rural guard, will accommodate 8 animals.

There is no hospital.

Some of the buildings described above could be used for storehouses.

The ayuntamiento is on the main street, to the east of the road that leads to Camagüey. The telegraph and post-office are on this road, near the main street; both in the same building. The rural guard station is also on this road near edge of town. The cable office is near the extreme west end of the main street.

There is a camp site 6 miles north of the town, on a lower ford of the Najasa River; commands a bridge; suitable for a large force.

There are no defenses.

Roads out of town: One road north to Camagüey. Outside of the town, this road divides into two; one goes 5 miles to the west through Quemados, the other, continuing direct, passes through Guaicanámar and Contramaestre. Loop roads and trails leave the latter one and run east and west.

Buenaventura.—Barrio. A rural district northwest of Santa Cruz del Sur.

Curajaya.—Barrio and sitio. The sitio consists of the finca Curajaya and is situated 14 miles northwest of the town of Santa Cruz del Sur.

Doce Leguas.—Barrio. The barrio lies in the sea southwest of the town of Santa Cruz del Sur. It is a chain of keys on which there is no village or settlement. The easternmost end is 26 miles from Santa Cruz del Sur.

Guaicanámar.—Barrio and sitio. The sitio consists of the finca Guaicanámar, with 1 store; is the capital of the barrio, and situated 21 miles north of the town of Santa Cruz del Sur.

Guayabal.—Barrio and village. Ingenio Francisco is in the barrio. The village consists of about 300 inhabitants and has 105 houses, of which 7 are stores. It is on the south coast, 26 miles east of Santa Cruz del Sur. It is the shipping point of the ingenio Francisco, with which it is connected by a narrow-gauge railroad 10 miles long. There is a new wharf 1,050 feet long, at which ships drawing 12 feet can unload. A railroad switch runs on the wharf and cargoes are transferred direct from ships to cars. There is an old wharf to which all cargoes have to be lightered, ships anchoring about 500 yards out. The principal road leaving the village is the one to Guáimaro. It is a good road during the dry season, but practically impassable in the rainy season.

El Junco.—Barrio and village. The village is on the coast, 13 miles east of the town of Santa Cruz del Sur, and consists of 15 houses, 2 of which are frame. One of the frame buildings is a store and the other a large dwelling owned by Manuel Hernández, who also owns the entire village. Plenty of wood and water. A small canal runs up to the village from the sea, and is used for shipping timber to steamers. A great deal of timber is shipped from this point. The village is also known by the name of Guano Alto.

San Pedro.—Barrio. A rural district northwest of Santa Cruz del Sur and in the extreme northwest corner of the municipality. Contains the sitio of Buenaventura.

Buenaventura.—Sitio. Consists of the finca Buenaventura, with 2 houses; situated 28 miles northwest of the town of Santa Cruz del Sur.

Yaguabo.—Barrio and sitio. Two Spanish colonies named Bercerra and Sagasta and the fincas Caridad and Prado are in the barrio. The sitio of Yaguabo consists of 2 houses, situated on the El Junco-Guaicanámar road, 11 miles from El Junco and about 12 miles by road, or 5½ miles in direct line, northeast of the town of Santa Cruz del Sur.

JUDICIAL DISTRICT OF MORÓN.

Township:	Population.
Ciego de Avila	17,741
Morón	13,898

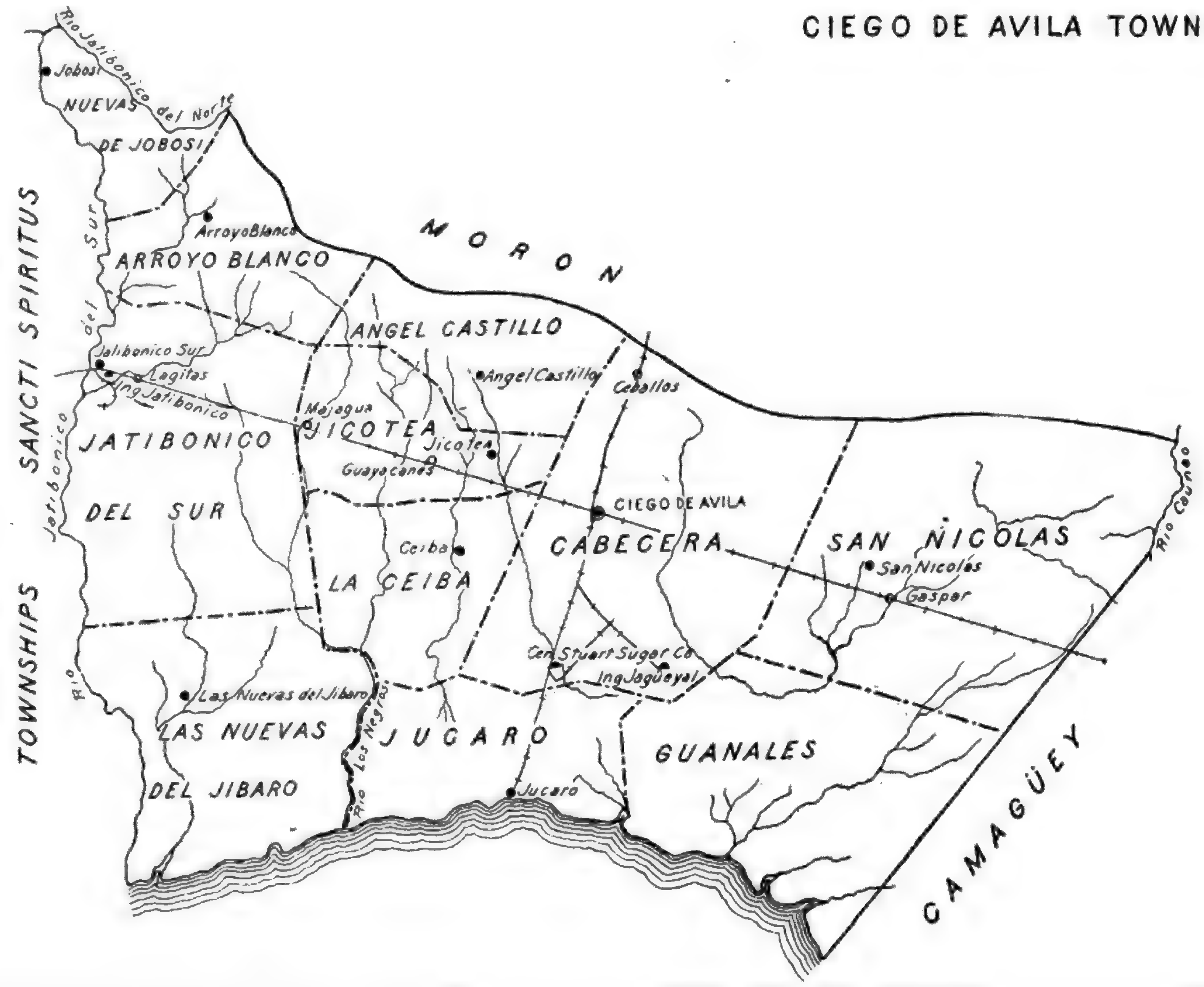
TOWNSHIP OF CIEGO DE AVILA (CAPITAL, CIEGO DE AVILA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Ciego de Avila	Cabecera, La	Rural and urban.		7,305
Ceballos.				
Jagüeyal.				
Silveira.				
Angel Castillo	Angel Castillo	Rural	11	413
Arroyo Blanco	Arroyo Blanco	do	29.1	997
Vertientes	Guanales	do	15.6	794
Jatibonico del Sur	Jatibonico del Sur	do	30.6	1,610
Lajitas.				
Jicotea	Jicotea	do	8	2,506
Guayacanes.				
Majagua.				
Júcaro	Júcaro	do	16.5	569
La Ceiba	La Ceiba	do	10	475
Las Nuevas del Jíbaro	Las Nuevas del Jíbaro	do	29.7	1,201
Jobosí	Nuevas de Jobosí	do	41.4	802
San Nicolás	San Nicolás	do	14	1,069
Gaspar.				

Ciego de Avila.—Barrio and town. The town of Ciego de Avila is situated 280 miles east of Havana, 260 miles west of Santiago, 26½ miles south of San Fernando, and 16½ miles north of Júcaro, in a rich, gently undulating, agricultural country; 137 feet above sea level. It is the capital of the municipality and barrio of the same name.

Sugar, citrus fruit, wood, honey, cattle, and cheese are the principal industries. Its low appearance belies the importance of the town, which, situated in a rich district and at the intersection of two railroads, is a distributing center and transacts a large amount of business. At Ceballos, 8 miles

CIEGO DE AVILA TOWNSHIP



to the north, are the extensive citrus-fruit and sugar-cane plantations of the Development Company of Cuba (Ceballos & Co.); to the south and southwest are the sugar-cane fields of the Stuart Sugar Company at ingenio; also the central Jagüeyal and the extensive sugar-cane fields at Jatibonico.

There are a number of small shops and also several large merchandise stores, the most important of which is the rope and hardware store on the northwest corner of the plaza. There are in town three drug stores. There are two blacksmith shops, a lumber yard, and sawmill, and large repairs in wood and metal can be made at the shops of the Júcaro-San Fernando Railroad.

By far the largest number of houses in the town are small huts with dirt floors; few buildings fit for Americans; no good ones for rent. The only two-story buildings are the hardware store, above referred to, and the residence of the officials of the Júcaro-San Fernando Railroad.

Sanitation and health: The inhabitants claim that the town is healthful; it is dirty and neglected. Believed that November, December, March, and April are the most unhealthful because of low fevers. The surgeon states that, according to the records of the civil hospital, the rate of admission rises from 25 in other months to 75 and 100 in July and August.

Population, 4,242.

Water supply: Well and cistern water; quantity impracticable to estimate on account of many wells and cisterns in existence; quality always doubtful; should never be used without sterilizing. Steam pump and four small tanks, about 2,500 gallons altogether, in yard of Júcaro-San Fernando Railroad. Windmill in rear of store of Balbín & Pérez. Small, filthy stream flows through town from north. Water tank and steam pump; water comes from creek 2,000 yards east of Cuba Company Railroad station; capacity, 15,000 gallons.

Fifty yards east of station of Cuba Company Railroad an artesian well has been drilled just south of the track. The well is 110 feet deep, and is equipped with 25-horsepower steam pump; wooden tank of about 10,000 gallons capacity is opposite pump, on north side of track. Water ample and pure; needs no boiling.

Municipal waterworks are being constructed by the Obras Publicas. An artesian well, with 10-inch pipe, is being driven near southwest corner of cuartel. At present a depth of 120 feet has been reached and water struck, but the well is to be made deeper (1907).

Barracks or buildings suitable for same:

Belonging to the State: Cuartel; former Spanish general hospital; occupied by United States troops during second intervention and before their arrival used as a schoolhouse. Has accommodations for one battalion. Cistern of about 75,000 gallons capacity; water to be sterilized. No stable or corral. Construction: Masonry; tile roof; built in square, with central yard, and porches around the latter.

Civil hospital. Maintained by State as charity hospital; 24 beds. Constructed of wood and in good condition.

Buildings of Júcaro-San Fernando Railroad, which is government property. Description, see below, under "Railroads."

Belonging to municipality: Ayuntamiento building. Contains office of alcalde, municipal judge, and captain of rural guard; serves also as police station. Square building with small central yard; construction, masonry; dimensions, about 60 feet. Accommodations in yard for 12 horses.

House numbered 36 and 38 calle Independencia; 50 by 80 feet; wood; in use as schoolhouse.

House No. 31 calle Libertad; wood, with tile roof; used as business office and drug store; dimensions, 75 by 30 feet.

Stone building with tile roof; two rooms, one loopholed for infantry fire, the other has barred windows and ceilings of steel rails and masonry arches; probably former prison; damp; dimensions, 20 by 40 feet.

Accommodations immediately available: For officers, "La Popular," a sort of assembly rooms or club; southwest corner of calle Libertad and Antonio Macéo. Will accommodate 20 officers.

Spanish Club, on west side of plaza, next to hotel; will accommodate 15 officers.

For troops: One company at church; one company at schoolhouse, public building; one company at ayuntamiento.

southwest corner of plaza, public building; one company at Cuba Company Railroad station; one company at Júcaro-San Fernando Railroad station; two companies in car shed of Júcaro-San Fernando station.

There are numerous other buildings in town, which, if vacant, would furnish quarters for a company each.

Stables: The only stable in town is at the ayuntamiento building described above.

Corrals: There are small corrals in fenced plots on the edge of town.

Hospitals: The cuartel and civil hospital could be used for hospital purposes, if necessary.

Telegraph and telephone connections: There are two telegraph lines. The government line has two wires to Santa Clara and Camagüey, one to Morón, and one to Júcaro (cable station of the Cuba Submarine Telegraph Company (Limited).

The other is the telegraph line of the Cuba Company Railroad, with one wire for railroad business only.

Telephones connected with the line of the Júcaro-San Fernando Railroad, for service of railroad only, and with the lines of the rural guard to Silveira and Jicotea; other line of rural guard out of order.

Camp sites: Extensive camp sites in every direction, with fine grazing and plenty of wood; water limited.

West of town ground rises gently for a thousand yards, and then descends gently for a mile to Los Negros Creek; extensive camp sites for two brigades, on both sides of the Camino Real.

Water for stock in Los Negros Creek, or in small creek 300 yards west of town; fine grazing; wood from woods along Los Negros Creek. Water for troops should come from Ciego de Avila.

Camp sites for a brigade on both sides of the Cuba Company Railroad, 1 mile east of the station.

Similar camp sites north of town, where there is a tank and a steam pump of the Júcaro-San Fernando Railroad; capacity of tank 5,600 gallons; good grazing, and woods near.

All these camp sites are good in dry weather only.

After crossing Menchaca Creek, 1 mile east of Ciego de Avila, the Camino Real ascends a gently rolling plateau, which reaches within 200 yards of the creek and has a command of 75 feet to the west and south, and a view of Ciego de Avila. This position was evidently used in former times by the Spanish army, as traces of fortifications still remain. This feature of the terrain forms a well-drained camp site, as does the ground south of the road 500 yards farther on; capacity, a brigade; abundant wood, water, and grazing.

Two wells on edge of creek; one on each side and within 25 paces of bridge. Another well in fenced pasture, 50 yards north of road and 200 yards west of bridge. Tank of Cuba Company Railroad, with an estimated capacity of 15,000 gallons, 500 yards south of bridge. On April 5, 1907, after prolonged dry spell, there was plenty of water in the creek.

Defences: During the war of 1895–1898 Ciego de Avila was the headquarters of the Trocha. Blockhouses 26 and 27 are just south and north of the town, respectively.

Three old blockhouses near the cuartel date back to the war of 1868. Two of them are two-story masonry buildings with two tiers of loopholes for infantry fire; in poor condition. The other one is a two-story blockhouse, 25 feet square at base; arranged for artillery fire in two tiers; in ruins.

Railroads: Júcaro-San Fernando Railroad; government road; leased.

Fuel, wood; gauge, standard; rails, 60 pounds; roadbed poor; ballast, dirt.

Rolling stock, poor and rickety; consists of 2 locomotives, 5 passenger and 11 box cars, and 8 trucks.

Station opposite cuartel; building of wood; office building 80 by 30 feet; has corrugated iron roof, which also forms shed over two tracks; tile platform 8 feet wide and 1½ feet above rail.

Adjoining on south is a freight shed; wood; 65 by 20 feet; latticed sides; masonry platform 6 feet wide, covered by corrugated iron roof of shed; on level with car floor. Opposite station are repair shops containing steam pump, boiler, engine lathes, and other arrangements for metal and woodwork; open lumber shed, 50 feet square, with tile roof; contains at present 150,000 feet of lumber, mostly bridge timbers (1907).

Quarters for officials, a two-story double house; storerooms adjoin it on the west.

Car shed 200 yards north of station; 150 by 20 feet; 14 feet to eaves; sides covered with two tiers of corrugated iron, last 4 feet open; corrugated iron roof. Three side tracks, each about 200 yards in length.

Small steel water tank; not used for engines; at gate between railroad yard and cuartel.

Platforms at freight shed. Timber ramp, 175 by 7 feet, about 100 yards south of station; seems to have been designed as coal shed, but can be used as platform.

The Cuba Company Railroad is a public line from Santa Clara to Santiago.

Fuel, coal; gauge, standard; rail, 85 pounds; roadbed, poor; ballast, dirt.

Tank, 1 mile east of station; capacity about 15,000 gallons.

Station, on southwest edge of town, 500 yards south of cuartel. Station and freight building under one corrugated iron roof; wood; dimensions, 80 by 20 feet; surrounded by covered dirt platform 12 feet wide.

Coal bin, 75 by 12 feet, on timber trestle; capacity about 450 cubic yards; situated on switch connecting with Júcaro-San Fernando Railroad.

Sidetracks: Three hundred paces west of station begins sidetrack 700 yards in length. Short sidetrack for unloading immediately in rear of station. Two switches; one east of station, with coal bin, and the other west of station, with cattle chute and small corral. These switches connect with the Júcaro-San Fernando Railroad.

Roads leading out of town: Camino Real; wagon road west to Sancti Spiritus and east to Camagüey. To Ceballos; wagon road in good weather only. To Quince y Media (Silveira); wagon road in good weather only. To Tasajera; wagon road in good weather only.

Ceballos.—Town. Situated 8 miles north of Ciego de Avila; on the Júcaro and San Fernando Railroad. Lies on the municipal boundary between Ciego de Avila and Morón.

Jurisdiction claimed by Ciego de Avila. Development of Cuba Company is located here. It is engaged in the citrus fruit business, has large sugar-cane fields, and deals in land. At date of report (December 22, 1906) company controls about 25,000 acres and 350,000 fruit trees. The location is in rather flat country on the Júcaro-San Fernando Railroad, halfway between blockhouses 39 and 40 of the Trocha. The place is clean, and health conditions seem to be favorable. A fine hotel with all modern conveniences has been built as a winter resort. The northern part of the settlement is formed by one long street of native cottages erected by the company for the families of its laborers. There are in all about 400 of these cottages, with an average floor space for 20 soldiers.

Population, about 800.

Water supply: Several wells, pumps, and windmills. The most important source of supply is a steam pump in the power house, which raises the water by compressed air from a well 300 feet deep to a tank, from which it is distributed over the settlement. The water from this well is believed to be absolutely pure and to need no sterilization. The capacity of the pump is 200 gallons per minute.

Electricity is used. Power house contains two engines, each of 200 horsepower, and a steam pump with capacity of 200 gallons per minute; has steam laundry attached. Wood is used as fuel for the plant.

Buildings: Old storehouse, or dwelling, 95 by 30 feet, empty; would accommodate one company. New packing house 115 by 124 feet; one-third of building is floored and roofed, another third is floored only, and the rest has floor joists and uprights for sides in place; would accommodate two companies when completed. Employees' hotel, new, would accommodate one company. Laborers' barracks, 100 by 12 feet, partly occupied; would accommodate one company. Employees' cottages in north part of town; in all could accommodate about 2,000 soldiers. Schoolhouse, wood, 20 by 30 feet. Old packing house, wood, 100 by 30 feet, filled with agricultural implements, etc.; has four stalls in west end. Native store, new, L-shaped, 100 by 16 feet; would accommodate a company. A sort of town hall; good location, and accommodations for main guard. All buildings of wood with roofs of shingle, rubberoid, or corrugated iron. In native part of town roofs are of palm.

There is one stable with 40 stalls, one with 27 stalls, and one with 24 stalls. Two of these stables, the laborers' barracks, and the windmill and tank, with capacity of 1,000 gallons, are all within an inclosure. This inclosure would accommodate a dozen wagons in free spaces. There are also a number of pastures around the village.

No hospital. The Plaza Hotel would make a good general hospital or headquarters of a general commanding a large force. Has electric lights, shower baths, ample porches, high tower.

No telegraphic communication. A telephone line is to be put up between Ceballos and Ciego de Avila. Post-office, bank, and other offices are all in administration building. There is a veterinary hospital with four stalls and two blacksmith shops, well equipped.

Ice machine in power house has capacity of 15 tons per day.

Defenses: Blockhouse 40 just north and 39 just south of the village. Water in creek which is near blockhouse 40.

Railroad: Júcaro and San Fernando Railroad north to Morón and San Fernando and south to Ciego de Avila and Júcaro. No entraining facilities except the side track of 100 yards with small portable ramp. It is believed that a spur will be run along the back porch of the new packing house. This porch is the level of the car floor, is about 10 feet wide, and will no doubt have a roof.

One wagon road leading from village to Ciego de Avila.

Jagüeyal.—Village. About 7 miles east of south of Ciego de Avila. Consists of the buildings of the sugar mill Jagüeyal and the houses occupied by the employees. A spur of the Júcaro-San Fernando Railroad is being built from La Carolina to Jagüeyal (1908).

Silveira.—Village. This place is known as Quince y Media by the people of the locality, from the fact that it lies half-way between blockhouses 15 and 16 of the Trocha. It is 7 miles south of Ciego de Avila and 9½ miles north of Júcaro. It is the railroad station for the plantation of the Stuart Sugar Company. This sugar company has constructed at this point a number of buildings for the temporary use of their employees pending the completion of the plant at the ingenio, the site of which is known among the people as La Casimba. At Silveira there is an administration building, 10 cottages, a barn, 2 sheds, a steam pump and a 1,200-gallon steel tank, two windmills and two tanks (one of 1,200 gallons' and the other of 2,400 gallons' capacity), a railroad station building, and a two-story bakery building. There are also some other buildings of minor importance.

Angel Castillo.—Barrio and village. The barrio is a district lying northwest of Ciego de Avila. The village is 11 miles northwest of Ciego de Avila, and contains a small store, a school building, and 4 houses. Has telephonic communication over the rural-guard line with Ciego de Avila, Marroquín, and Jicotea. Angel Castillo was formerly known as Lázaro López.

Arroyo Blanco.—Barrio and village. The village is 29.1 miles northwest of Ciego de Avila. This place consists of 4 stores and 75 houses. Population, about 300. Has telephone communication, through rural-guard telephone line, with Jatibonico del Sur and Jicotea.

Guanales.—Barrio. A district occupying the southeast corner of the township, the sitio Vertientes being the southeasternmost point. No point or village bearing the name Guanales.

Vertientes.—Sitio. A small settlement, containing a store, 5 houses, 5 sheds, a wharf, and an adjoining storehouse. The inhabitants number about 7. Houses would hold one company, if vacated by inhabitants. Water supply consists of four wells, two of which are in use; all wells claimed to have good drinking water.

Defenses consist of remains of two Spanish forts, one at each end of the sitio; 300 yards apart on a line running 5 degrees north of east.

Eastern fort: Square trace; length of side 15 feet; no banquette; interior slope 3/1; command 8 feet; relief 9½ feet; superior slope worn off level. Exterior slope 3/1, no berm; ditch 6 feet across bottom; counterscarp continuous with interior slope of glacis 1/1; glacis 2/1.

Western fort: Double work; closed; pentagon, with small hexagon attached at salient. From southwest salient of larger work a ditch 2 feet wide and 2 feet deep extends for 50 yards, at 20 degrees west of south.

The Estero de Vertientes extends south of the settlement of Vertientes in a general southwesterly direction by a winding course, said to be 6 miles and by air line 3 miles, to the open sea. At Vertientes there is no crossing; the estero is 45 feet wide, 9 feet deep alongside the wharf, and 12 feet in mid-channel. Water clear and running, but salty. Banks 3 feet above water level, sloping down gradually; lined on both sides, for about 100 yards below the wharf on north side of stream, with small brush, which is 6 to 8 feet high. Bottom hard. At mouth, stream is said to be 150 feet wide and 30 feet deep. There is one small sailboat which makes irregular trips from Vertientes to Júcaro. Only landing place is wooden wharf at Vertientes; 12 feet by 21 feet in 9 feet of water. Connected with wharf is a storehouse of same dimensions as wharf, and the two are situated about 250 yards southwest of store.

Jatibonico del Sur.—Barrio and village. Besides the village of the same name, the barrio also contains the sitio of Lajitas. The village is situated 27 miles northwest of Ciego de Avila by Cuba Company Railroad, at a point where that railroad crosses the Jatibonico del Sur River. It gives its name to the barrio within which it lies. Seat of the Jatibonico sugar plantation and mill. Contains 4 stores, about 50 houses, and a group of some 25 negro huts. Population, about 400; varies with state of sugar crop. Rural guard telephone to Arroyo Blanco. Station of Cuba Company Railroad.

Lajitas.—Sitio. On the Cuba Company Railroad, about 1½ miles east of Jatibonico del Sur and consists of a few houses.

Jicotea.—Barrio and village. Besides the village bearing its name this barrio contains the railroad station of Guayacanes and the sitio of Majagua. The village of Jicotea lies 8 miles northwest of Ciego de Avila. It is a scattered village of about 3 stores, 35 houses, and 150 inhabitants. Has a detachment of rural guard and telephone. Remains of Spanish entrenchments just outside of village to the east. Spanish barracks for one company; in ruins. Rural guard barracks will shelter 50 men. At western exit of village there is trace of Spanish stockade. Road to Jicotea evidently strongly guarded by Spanish. The rolling country east of Jicotea contains enough well-drained space to camp a division; no water except at Jicotea Creek, which, however, seems good.

Guayacanes.—Village. A railroad station of Cuba Company Railroad, 11 miles west of Ciego de Avila. Shipping place for lumber. Consists of a half-dozen houses and huts and has about 40 inhabitants.

Majagua.—Sitio. A station on the Cuba Company Railroad, 17 miles west of Ciego de Avila. Contains two stores, a barber shop, two huts and a bull-cart factory, and has 35 inhabitants. Great shipping place for lumber. Factory has 36-horsepower steam pump and a well 38½ feet deep with 22 feet of water in it. Railroad tank of 10,000 gallons capacity (estimated), and steam pump on banks of Río Grande (Majagua River) 500 yards east of station. Majagua lies on elevated, well-drained ground, which affords numerous camp sites for a brigade, with wood, water, and grass convenient; was probably so used by the Spaniards as there are traces of Spanish entrenchments.

Júcaro.—Barrio and village. The village of this name is about 16½ miles southwest of Ciego de Avila, on the south coast of Cuba, on swampy ground 3 feet above high tide. It is surrounded on all sides by swamps or by the sea. The village stands on land belonging to an immense estate extending east from Cienfuegos.

Population, about 250.

Fishing, and cutting and shipping timber (large lumber yard west of village) are the principal industries. In the village there are 1 restaurant, 1 butcher shop, 1 saloon, and 2 general merchandise stores.

Water supply: Cisterns for rain water. No wells or windmills. Quantity of water difficult to estimate owing to number of small tanks; supply said to be ample.

Buildings: Schoolhouse, stone, with tile roof. Policemen's quarters, a small wooden hut. Railroad station building, wood, with galvanized-iron roof. (Railroad is government property under lease.) Most of the buildings are small huts; few substantial buildings. All ground is swampy and there is no place for a camp. The schoolhouse could accommodate 50 men. A private residence, on south side of plaza, could accommodate another 50.

Suitable space for 20 animals, in dry weather only, in a small corral 100 yards northwest of station. There is room for a few wagons in the plaza.

No hospital. Health conditions reported excellent.

No storehouse.

Post-office and telegraph office in northwest portion of village on corner of calle Cuba and calle Colón. Cable office on corner of calle La Marina and calle La Paz. Telephone belongs to Júcaro-San Fernando Railroad.

Camp sites: All ground is marshy and there is no place for camps. Small detachments should camp on station platform, and in good weather sleep on pier.

Defenses: On north edge of village, 25 yards west of railroad, stands a two-story blockhouse built of rails; falling to pieces and unfit for use. On eastern and western extremities of village are remnants or traces of small infantry works—one at Point Burro, and one halfway to Point Burro. North of the village stands the first of 68 blockhouses, part of the Júcaro-Morón trocha in Spanish times.

Railroads: Júcaro-San Fernando Railroad. Station building about 25 by 80 feet, galvanized-iron roof; platform 12 feet wide along front of building and continuing 150 feet beyond, in line with pier. Platform on level with car floor. Short ramp 4 feet wide for moving freight from ground to platform. No water tank or fuel. Switches of the derailing kind. Three hundred yards of side track just north of station building; other side track, about 50 yards long, runs to pier head. Three hundred paces north of station, on west side of track, is a neglected Y; length of track of the southern arc, 384 paces. Six hundred yards north of the station the ground has been prepared for a track to Point Burro; no sleepers or rails have been laid; is used as a wagon road.

Railroad pier: Fifteen feet across, outside measurements. Carries railroad track; connection with main track by switch. Length of pier, 320 paces, including pierhead of 100 paces (40 feet wide, with double track). In good condition (November, 1906) though square timbers begin to show effect of climate; part of flooring of pierhead (2-inch planking) gone. Small piers: Small landings in shallow water; decaying and unsafe. Three of them have 2 feet of water; one serviceable for light freight.

Port: Subport of Tunas; maximum draft at pier, 7 feet; minimum, 4 feet. Tide, 3 feet. Steamers lie 4 to 5 miles offshore and freight is lightered.

La Ceiba.—Barrio and sitio. The sitio is 10 miles southwest of Ciego de Avila and consists of 4 huts.

Las Nuevas del Jíbaro.—Barrio and sitio. A district lying southwest of Ciego de Avila.

The barrio takes its name from a hacienda situated within the district, and 29.7 miles southwest of Ciego de Avila. It consists of the old settlement of 6 huts and the hacienda proper of 1 store and 6 houses.

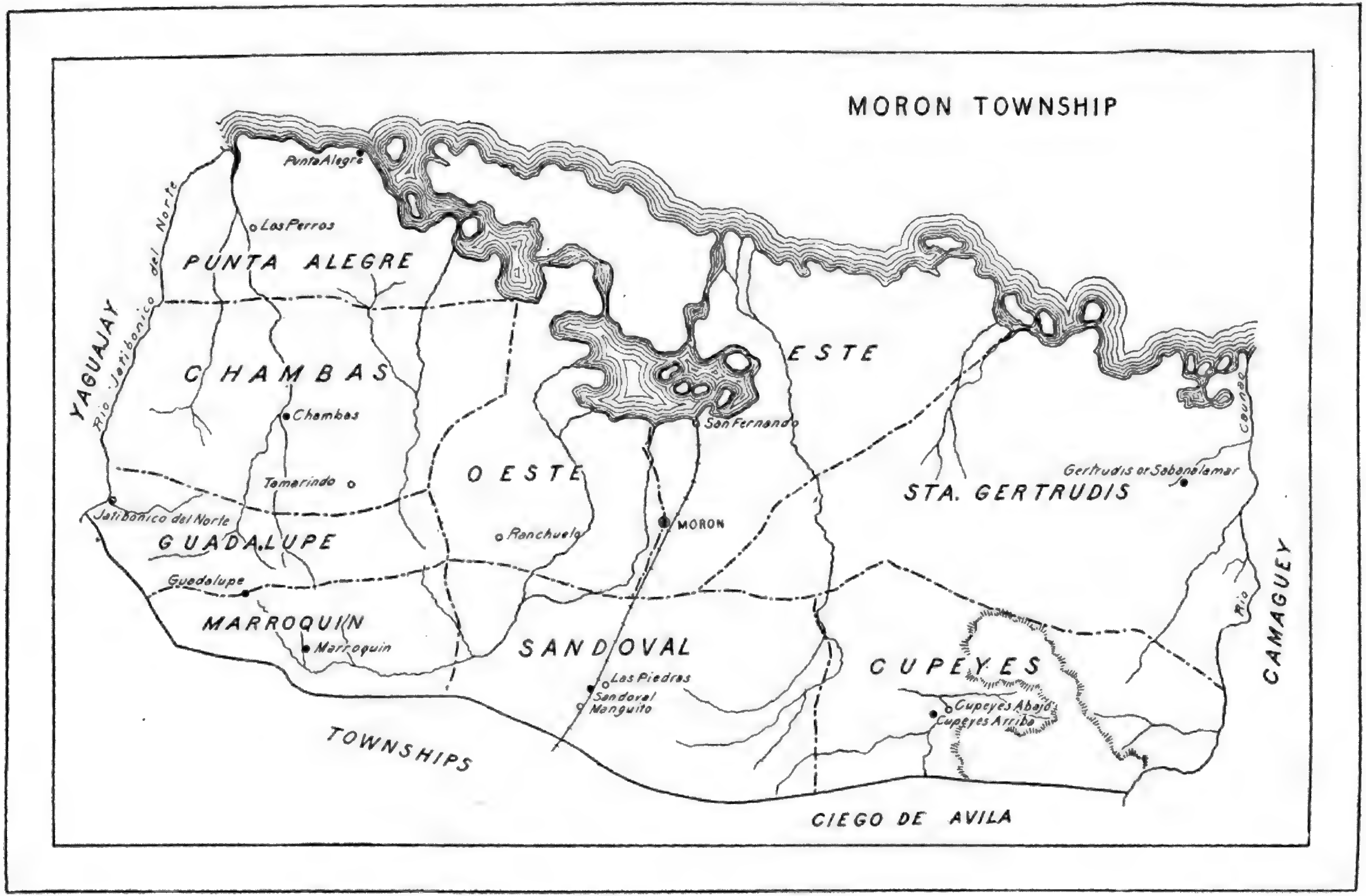
Nuevas de Jobosí.—Barrio and sitio. The sitio is a small settlement consisting of a few huts, and is situated 40 miles northwest of Ciego de Avila, and 20 miles northwest of Guadalupe.

San Nicolás.—Barrio and sitio. The point of this name is a farmhouse situated on the Camino Real Ciego de Avila-Camgüey, 14 miles east of the town of Ciego de Avila. The district also contains a station of the Cuba Company Railroad, 15 miles southeast of Ciego de Avila, named Gaspar; formerly called Potrero.

TOWNSHIP OF MORÓN (CAPITAL, MORÓN).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Morón	Este	Rural and urban.		1,899
	Oeste	do		2,166
San Fernando.				
Ranchuelo.				
Chambas	Chambas	Rural	19.7	1,943
Tamarindo.				
Cupeyes	Cupeyes	do	17.7	804
Guadalupe	Guadalupe	do	22.6	2,057
Jatibonico del Norte.				
Marroquín	Marroquín	do	23.3	1,549
Punta Alegre	Punta Alegre	do	29	1,155
Los Perros.				
Punta de San Juan.				
Sandoval	Sandoval	do	8.5	2,024
Las Piedras.				
Manguito.				
Santa Gertrudis, or Sabanalamar.	Santa Gertrudis	do	19.2	307
Embarcadero Santa Gertrudis.				

Morón.—Town. The town is situated 4½ miles from the north coast and is 25 feet above sea level. North of it


MORON TOWNSHIP
Punta Alegre
Los Perros
PUNTA ALEGRE
YAGUAJAY
Rio Jatibonico del Norte
CHAMBAS
Chambas
Tamarindo
Jatibonico del Norte
GUADALUPE
Guadalupe
MARROQUIN
Marroquin
OESTE
Ranchuelo
San Fernando
MORON
ESTE
SANDOVAL
Las Piedras
Sandoval
Manguito
STA. GERTRUDIS
Gertrudis or Sabanalamar
Caunao
Rio
CAMAGUEY
CUPEYES
Cupeyes Abajo
Cupeyes Arriba
TOWNSHIPS
CIEGO DE AVILA

begin the extensive swamps lining the coast. It is more than 100 years old and is the seat of government of the municipality. Its port is San Fernando, but for coastwise trade only, there being no custom-house or inspector. Town fairly clean. Low fevers in May and October. Part of the town is in barrio Este and part in barrio Oeste.

The people are engaged principally in agriculture; commerce is local and small. The town contains 3 bakeries, 2 drug stores, 3 hotels (poor), a tannery, a steam sawmill, and 2 printing offices.

Population, 2,527.

Water is obtained from wells, ranging from 15 to 20 feet deep, and must be boiled. Steam pump with 5,000-gallon tank at railroad station. Stock may be watered from wells or from a marshy stream on calle Salomé Gómez, 100 yards east of railroad. This stream should be used only when unavoidable, as water is bad and approaches are deep in mire.

Buildings suitable for barracks: The buildings of the town are of the usual type. On the principal street they are one-story stone buildings with tile roofs, and the side streets contain small wooden or mud houses with palm-leaf roofs. Those most suitable for barracks are: Alcalde's office, on calle Martí, and the adjoining building, which is used as a police station; part of one long building, filling block from street to street; dimensions, about 75 by 30 feet; capacity, one company. Railroad station, description of which is given below under railroads, would accommodate one company. The hotels Telégrafo and Central would accommodate one company each. Private buildings on calle Martí, north of calle Salomé Gómez, and around plaza would, if vacated, accommodate a battalion; are of substantial masonry and the best houses in town. The church, on plaza, would hold a company. Assembly rooms (former casino of Spanish officers) and the schoolhouse east of calles Martí and Máximo Gómez would make suitable quarters for officers.

Post-office and telegraph office are in same building at 52 calle Martí. The telegraph is a government line running to Ciego de Avila; one wire, on poles of railroad telephone line. It has connection east and west at Ciego and also with the cable station at Júcaro. The telephone belongs to the railroad; office in station; one wire; no instruments in town.

Camp sites: Good camp ground for one battalion along calle Salomé Gómez, east of calle Bonachea (baseball ground); several small, fenced pastures in immediate vicinity, available for use as corrals; water for stock in swampy creek, 100 yards east of railroad.

For one company, corner calle Martí and Libertad. Good pasture; fenced; on ground bounded by calle Narciso López, railroad, and calle Libertad; subdivided by fences.

For two battalions, between calle Libertad and Salomé Gómez and west of calle José de la Luz Caballero. Avoid ground east of railroad.

For a division, the grassy plain, stretching for several miles to the south of the town and west of the railroad.

All the camp sites named are excellent in dry weather, but, owing to the very slight slope of the ground, would be bad in the rainy season. Smaller bodies would prefer immediate vicinity of town on account of water, and numerous fenced plots from 150 to 300 yards square are to be found on the edge of the town; water could be obtained from railroad tank.

Defenses: Blockhouse No. 61 of Trocha, at railroad crossing, southern exit of town. Remnant of a small rectangular, bastioned earthwork for infantry (sides, estimated, 40 by 75 feet; embankment, 2½ feet high) is visible from railroad and is about 1,000 yards south of town and 100 yards west of track.

Railroads: Júcaro-San Fernando Railroad; 4½ miles to San Fernando on north coast, 22½ miles south to Ciego de Avila; has connection with Cuba Company Railroad.

Station on south edge of town on a spur running 200 yards north to a point where main line turns northeast to pass town. Station building, wood, tile roof; dimensions, 45 by 20 feet; platform of dirt, faced with brick, 1½ feet above rail, 7 feet wide, and has roof. Freight building, wood, tile roof; 52 by 20 feet; wooden platform, on level of car floor, runs along building and is 7 feet wide and has roof; steep ramp leads up to it from the south. Between the two buildings is the steam pump. A steel tank is south of freight building; estimated dimensions, 20 by 6 by 6 feet; estimated capacity, 5,000 gallons; on wooden trestle 15 feet high. Sidetrack of 100 yards at station. No entraining or detraining facilities except the two platforms at freight houses, and they are very poor.

Roads leading out of town: West, to Ranchuelo and Chambas; east, to Santa Gertrudis; and southeast, to Camagüey.

San Fernando.—Village. The northern terminus of the Júcaro-San Fernando trocha and the Júcaro-San Fernando Railroad, and is 4 miles north of Morón and 42½ miles north of Júcaro. It is the port of Morón and the island of Turiguanó for coast trade only, there being no custom-house. It consists of a few native houses and a depot and freight house pertaining to the railroad.

Turiguanó.—Island. The island is owned by an American land company. It is reached from San Fernando by boat through a small estero, which bears from San Fernando about 3° east of north. The eastern estero, known as the Estero del Medio, is about 6¼ miles in length, in many places not more than 15 feet wide, and has an average depth of 4 feet with a strong current toward the sea. The northern mouth of the estero is named on the map Boca de la Yana, but the local name is Boca de la Ciénaga. Boats have to be manipulated in this channel by poling. The western estero carries but 1½ feet of water in some places, and passes through a succession of eleven small lagoons; it is very narrow and so shallow that only empty boats pass there. The trees overhang the estero, and sailboats, if light enough to pass, must lower their masts. Poling is the only method of propulsion. The island is about 20 miles in length, from east to west, and at its widest part measures about 6 miles across. A range of hills, reaching elevations of from 200 to 300 feet, runs through the middle of the island from east to west. The two easternmost hills are known as Guayavito, the next group as La Loma de Jíbaro, and the westernmost one as La Loma de Liografo. At this latter point the Spaniards maintained a signal station. The island contains valuable timber and has fine pastures and agricultural lands. There are about 700 head of cattle on the island and about as many hogs. There is a small pier with about 3 feet of water at Tierra Plana and also a 30-foot gasoline launch. The headquarters of the company are at Hato Viejo. Total population of the island is about 30. There is a 20-foot wagon road from Hato Viejo to the sawmill and thence to the wharf; practicable for wagons in good weather.

Laguna de Leche.—Lake. Has fresh water of a uniform depth of about 8 feet, and the bottom is overlaid with a stratum of about 3 feet of white chalk, hence the name of the lake. It is about 9 miles long and about 4 miles wide.

Ranchuelo.—Village. A place 7 miles from Morón, having 30 houses, including two stores and a schoolhouse.

Chambas.—Barrio and village. The village is on the west bank of the Chambas River, about 20½ miles north of west of Morón. The banks of the river are about 20 feet high, making the approaches to the village bad. It has 50 houses and 4 stores. Good water can be obtained from river. There is a camp site for a regiment 600 yards west of village. The barrio also contains the sitio of Tamarindo.

Tamarindo.—Sitio. It contains 3 stores and 25 houses, and is situated 20 miles southeast of Morón.

Cupeyes.—Barrio and sitio. The sitio is 17.7 miles south-southeast of the town of Morón. It consists of two adjoining fincas of one house each, named Cupeyes Arriba and Cupeyes Abajo.

Guadalupe.—Barrio and village. A barrio lying west of Morón. Besides the village of this name the sitio Jatibonico del Norte is in the district. The village is situated about 22½ miles west of the capital of the township. It contains 3 small stores, a schoolhouse, and 12 scattered houses.

Jatibonico del Norte.—Sitio. Situated 29 miles west of Morón at the northeast corner of the barrio. It contains a small store and three houses.

Marroquín.—Barrio and sitio. The barrio is a district lying southwest of Morón. The sitio is 23.3 miles southwest of the town of Morón, and consists of two huts.

Punta Alegre.—Barrio and village. The barrio lies northwest of Morón and besides the village of the same name contains the village of Los Perros and the sitio of Punta de

San Juan. The village is situated on the north coast, 29 miles northwest of the town of Morón. Population, about 400. It contains 124 wooden houses with thatched roofs, some salt pans with a steam evaporator, and a small gypsum factory, the mine being half a mile southwest of the village. Village has but one store. Water for stock obtained from well on the seashore; heavily impregnated with magnesia. This is the only available port between Caibarién and San Fernando. Small wharf for loading and unloading boats; 8 feet of water at low tide and 10 feet at high tide.

Los Perros.—Village. It is about 11¾ miles from Chambas. Has a store and about 15 houses. No camp sites. Water obtained from wells.

Punta de San Juan.—Sitio. Situated 1½ miles east of Punta Alegre. Contains 6 houses belonging to the finca of Don Francisco Barceló. Twelve feet of water in channels; 10 feet where boats land. No wharf; only a shed. From this point it is 27 miles to Ranchuelo, through a country totally without population and almost submerged in the rainy season. Contains good hiding places. There are plenty of wild hogs in the district.

Sandoval.—Barrio and sitio. The barrio lies southwest of Morón, and besides the sitio of the same name it contains the sitios of Las Piedras and Manguito. The sitio is 8.5 miles south-southwest of the town of Morón on the Júcaro-San Fernando Railroad and 5 miles north of Ceballos. It consists of a store and half a dozen scattered houses.

Las Piedras.—Sitio. A railroad station 11 miles south-southwest of Morón and consists of a store and 10 scattered houses.

Manguito.—Sitio. A point 11¼ miles north of Ciego de Avila and consists of 10 scattered houses. Two Spanish barracks in good state of repair; would accommodate one company each.

Santa Gertrudis.—Barrio and sitio. This is rather the name of a section of country than of a settlement, as there are but 3 houses at the spot to which the name of Santa Gertrudis or Sabanalamar is applied. From Morón as far as La Garita the road is at present (February, 1907) good for carts; from there on to the Embarcadero de Santa Gertrudis, about 2½ miles, the road is in very bad shape, owing to the wet character of the ground and the lumbering operations going on in the Sierra de Judas de Cunagua. There is a small wooden pier at the embarcadero, about 6½ by 33 feet; in poor shape and unable to bear any greater weight than about 400 pounds. Depth of water at pier, about 3¼ feet. There are not more than 10 or 12 thatched huts in the country surrounding the embarcadero, and the inhabitants are suspicious characters.

PROVINCE OF ORIENTE.

TABLE OF DISTANCES, IN MILES, BETWEEN TOWNS IN PROVINCE OF ORIENTE.

Alto Songo.																									
114	Auras.																								
124	164	Baracoa.																							
89	60	196	Bayamo.																						
120	6	170	66	Bocas.																					
51	130	99	131	136	Caimanera.																				
13	100	131	76	106	48	Caney.																			
103	74	194	15	80	148	90	Cauto.																		
30	110	147	60	116	74	16	74	Cobre.																	
5	109	129	84	115	56	8	98	25	Cristo.																
124	21	174	70	26	140	110	84	120	119	Fray Benito.															
125	12	175	71	17	141	111	85	121	120	9	Gibara.														
38	117	86	118	123	13	45	135	61	43	127	128	Guantánamo.													
102	12	152	48	18	118	88	62	102	97	22	23	105	Holguín.												
72	67	168	18	73	116	58	32	42	67	77	78	103	55	Jiguaní.											
127	97	244	37	103	171	113	39	97	122	107	108	158	85	55	Manzanillo.										
46	71	93	87	77	78	56	101	72	48	81	82	65	59	75	124	Mayarí.									
39	75	156	34	81	83	25	66	35	34	85	86	70	63	34	89	65	Palma Soriano.								
121	18	171	67	23	137	107	81	117	116	3	6	124	19	74	104	78	85	Potrerillo.							
148	40	195	76	34	160	134	63	136	143	78	51	147	42	76	102	102	109	57	Puerto Padre.						
72	106	58	122	112	60	86	136	102	77	116	117	47	94	110	159	35	94	113	137	Sagua de Tánamo.					
17	97	134	73	103	61	3	87	13	12	107	108	48	85	55	110	59	22	104	131	89	Santiago de Cuba.				
30	94	148	53	100	75	16	85	26	25	104	105	62	82	53	123	52	19	104	128	87	13	San Luís de las Enramadas.			
134	60	200	44	66	178	120	31	104	129	70	71	165	48	62	71	107	96	67	36	148	117	115	Victoria de las Tunas.		
117	87	218	27	93	161	103	39	87	112	97	98	148	75	45	20	120	79	94	103	155	100	92	70	Yara.	
699	625	765	609	631	863	685	596	669	694	685	636	730	613	627	636	672	751	632	601	713	682	680	565	635	Havana.

PROVINCE OF ORIENTE.

LOCATION AND BOUNDARY.

Oriente is situated in the eastern extremity of Cuba. It is bounded on the north by the Channel of Bahama, on the east by the Windward Passage, on the south by the Caribbean Sea, and on the west by the province of Camagüey.

AREA AND POPULATION.

The area is 12,741 square miles. It is about 220 miles long and 100 miles wide.

The population is 455,086, divided as follows: Native white, 50.9 per cent; foreign white, 6 per cent; colored, 43.1 per cent; or white, 56.9 per cent; colored, 43.1 per cent.

JUDICIAL AND MUNICIPAL DISTRICTS.

The province is divided into six judicial districts—Baracoa, Bayamo, Guantánamo, Holguín, Manzanillo, Santiago de Cuba. It is also divided into 15 municipal districts or townships.

PROVINCIAL GOVERNMENT.

There is a governor and provincial council of 8 members duly elected by the people. Each municipal district has a mayor and a municipal council.

CAPITAL AND PRINCIPAL TOWNS.

The capital of the province is Santiago de Cuba.

Other important towns are Manzanillo, Gibara, Guantánamo, Bayamo, and Baracoa. The latter is the oldest settlement in Cuba and was founded in 1512 by Velásquez.

GEOGRAPHY AND TOPOGRAPHY.

The highest mountains in Cuba are situated in the province of Oriente, where they reach elevations higher than any in the eastern ranges of the United States and only slightly lower than the highest peaks in Jamaica and Haiti. The mountainous area in this province is greater than the combined mountainous areas of all other provinces of the island. Its mountains occur in several groups, all composed of different kinds of rocks and having diverse structures, but more or less closely connected one with another.

The principal range is the Sierra Maestra, extending from Cabo Cruz to the vicinity of the Puerto de Guantánamo, 40 miles east of Santiago Bay. This range is continuous and of fairly uniform altitude, with the exception of a single break in the vicinity of Santiago, where the wide basin which is now partly occupied by Santiago Bay cuts entirely across the main trend of the range. The hills back of Santiago Bay, separating this basin from the drainage of the Río Cauto, correspond in structure to the northern foothills of the main Sierra, east and west of this break.

The slopes of the Sierra Maestra are very uniform throughout, being broken only by cuttings of the evenly spaced arroyos. In the western part of the range the mountains rise abruptly from the depths of the Caribbean Sea, but in the vicinity of the city of Santiago and to the eastward they are separated from the sea by a narrow coastal plain, which has been locally very much dissected. The streams which traverse it occupy valleys several hundred feet in depth, while the remnants of the plain appear in the tops of the hills.

East of Guantánamo estuary there are mountains which are structurally distinct from the Sierra Maestra, and these continue to Cape Maisí. They rise at first abruptly from the sea, but toward the eastern extremity of the island are bordered by terraced foothills. Toward the north they are continued across the island as features of bold relief connecting with the Cuchillas at Baracoa and with El Yunque, which lies to the southwest of that town. Extending westward from this eastern mass there are high plateaus and mesas forming the northern side of the great amphitheater, which drains into Guantánamo Bay.

The most prominent feature of the northern mountains of Oriente Province to the west of El Yunque is the range of mountains comprising the Sierras Cristal and Nipe. This range extends in a general east and west direction, but is separated into several distinct masses by the northward flowing streams, such as Río Sagua and Río Mayarí. The high country to the south of these mountains has the character of a deeply dissected plateau, the highest strata being native limestone. It is supposed that all of the mountains in the eastern part of Cuba have been carved from a high plateau, indications of which are seen in the level summits of El Yunque near Baracoa, and other flat-topped mountains which have been observed within the drainage of the Mayarí and Sagua rivers. The broad flat summits of the Sierra Nipe are also doubtless a remnant of this old plateau.

Below this highest level others are distinguishable as benches or broad plateaus. The two most prominent occur, respectively, at about 1,500 and 2,000 feet above sea level, according to barometer readings. The highest summits rise, perhaps, 800 or 1,000 feet higher. The 2,000-foot plateau forms, in the Sierra Nipe alone, an area estimated to be not less than 40 square miles in extent.

Considering the province of Oriente as a whole, therefore, the various mountain groups described above form two marginal ranges which merge in the eastern portion of the province and diverge toward the west. The southern range is the more continuous, while the northern is composed of irregular groups separated by numerous river valleys. Between these divergent ranges is a broad undulating plain, the famous Cauto Valley, which increases in breadth westward and extends to the northern coast between and beyond the diminishing mountain groups of the northern range. Further westward it merges with the more extended plains of Camagüey.

The extremely broken and precipitous character of the country causes the province to be less known than any of the others. There are some insignificant lakes in the interior; shoals, sand banks, reefs, creeks, and marshes are all constitutents of the geography and topography of Oriente.

RIVERS.

The principal river is the Cauto. It is one of the deepest rivers in Cuba, and is navigable for a distance of about 50 miles. The bar carries 6 feet of water. Other principal rivers are the Bayamo, Contramaestre, Moa, Gibara, Seco. Jauco, and Cautillo. Smaller rivers are Yariguá, Cajimaya. Téneme or Tesino, Sagua de Tánamo, Yaguaneque, Cabañas. Yamanigüey, Nibujón, Juraguá, Toa, Yumurí, and Mayarí in the north; Jojó, Sabana la Mar, Yateras, Guantánamo. Baconao, Aserradores, and Turquino in the south; Sevilla, Tana, Jibacoa, Yara, Jicoteas, Buey, Cauto, Birama, and Jobabo in the west.

COAST LINE.

The coast about Cape Maisí is in general rough and rocky. Seventy miles from Cape Maisí on the south coast the country flattens out and the mountains recede from the ocean, leaving a large and comparatively open plain. At this point occurs the harbor of Guantánamo.

The coast west of Guantánamo is extremely rough and mountainous. At a point 25 miles west of Guantánamo the mountains commence to recede from the coast, leaving near the sea one or two ranges of comparatively low foothills. Approaching Santiago the mountains recede farther and farther from the coast, leaving another large, irregular valley covered with rolling hills.

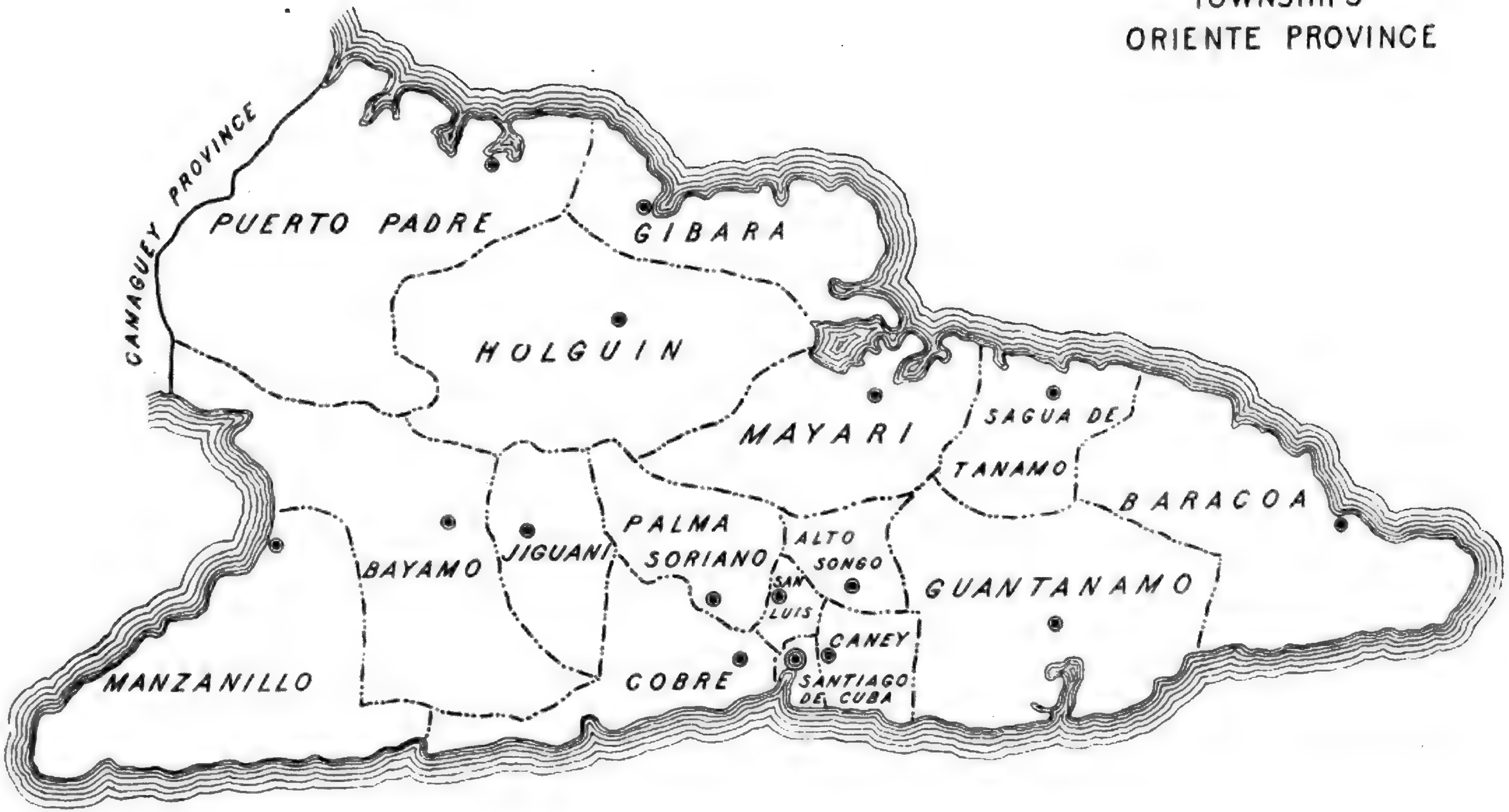
In this valley is situated Santiago de Cuba. The harbor is completely landlocked and absolutely safe. West of Santiago the mountains extend down to the water's edge. In fact, from Maisí to Cape Cruz the mountains at most points rise from the sea and anchorages are few and far between.

At Cape Cruz the coast bends sharply to the northward and the mountains fall back from the sea, and we come to the Bay or Gulf of Manzanillo.

Returning to the north coast and starting west from Baracoa the shore is still mountainous. The first harbor of importance is the Bay of Nipe. It is about 15 miles long and 8 or 9 miles wide and completely sheltered from the ocean. It is probably one of the finest harbors in the world.

Commencing at the Bay of Nipe the mountains recede from the ocean and practically come to an end so far as their extension westward is concerned. They swing south and gradually merge into the Central Plain.

West of Baracoa we find the harbors of Vita, Gibara, and Puerto Padre. These are the usual Cuban harbors, with deep, narrow entrances, and landlocked.



TOWNSHIPS
ORIENTE PROVINCE

AGRICULTURE, INDUSTRY, AND COMMERCE.

The principal products of the province are coffee, sugar cane, tobacco, cocoa, wax, honey, cocoanuts, bananas, and lumber. Cattle raising is also an important industry. There are 27 sugar mills in the province and a great many coffee plantations. Cocoa is usually raised in conjunction with coffee.

This province is much richer in minerals than any other in the island. The principal minerals are iron, copper, and manganese, although zinc, lead, coal, and gold mining claims have been registered. The principal mines are those of the Spanish-American Iron Company at Daiquirí and Mayarí, and those of the Juraguá Iron Company at Firmeza, for iron; the Cobre mines at Cobre for copper, and the mines at Ponupo for manganese. The manganese mines at the latter place are said to be the best in the world.

Towns arranged in order of importance of export trade are Manzanillo, Santiago, and Guantánamo; in import trade, Santiago, Manzanillo, Guantánamo. The leading export articles are sugar, iron, copper, wood and lumber, agricultural products. The leading import articles are cotton fabrics, live stock, leather goods, copper materials.

In Santiago are a number of tobacco factories, but the chief business is the export of raw materials and the importation of manufactured goods and provisions.

The only cocoanut-oil factory in the island is situated at Baracoa.

JUDICIAL DISTRICTS AND MUNICIPAL DISTRICTS.

Judicial district.	Township.
Baracoa	Baracoa.
Bayamo	Bayamo.
	Jiguaní.
Guantánamo	Guantánamo.
	Sagua de Tánamo.
Holguín	Gibara.
	Holguín.
	Mayarí.
	Puerto Padre.
Manzanillo	Manzanillo.

Judicial district.	Township.
iago de Cuba	Alto Songo. Caney. Cobre. Palma Soriano. San Luis. Santiago de Cuba.

JUDICIAL DISTRICT OF BARACOA.

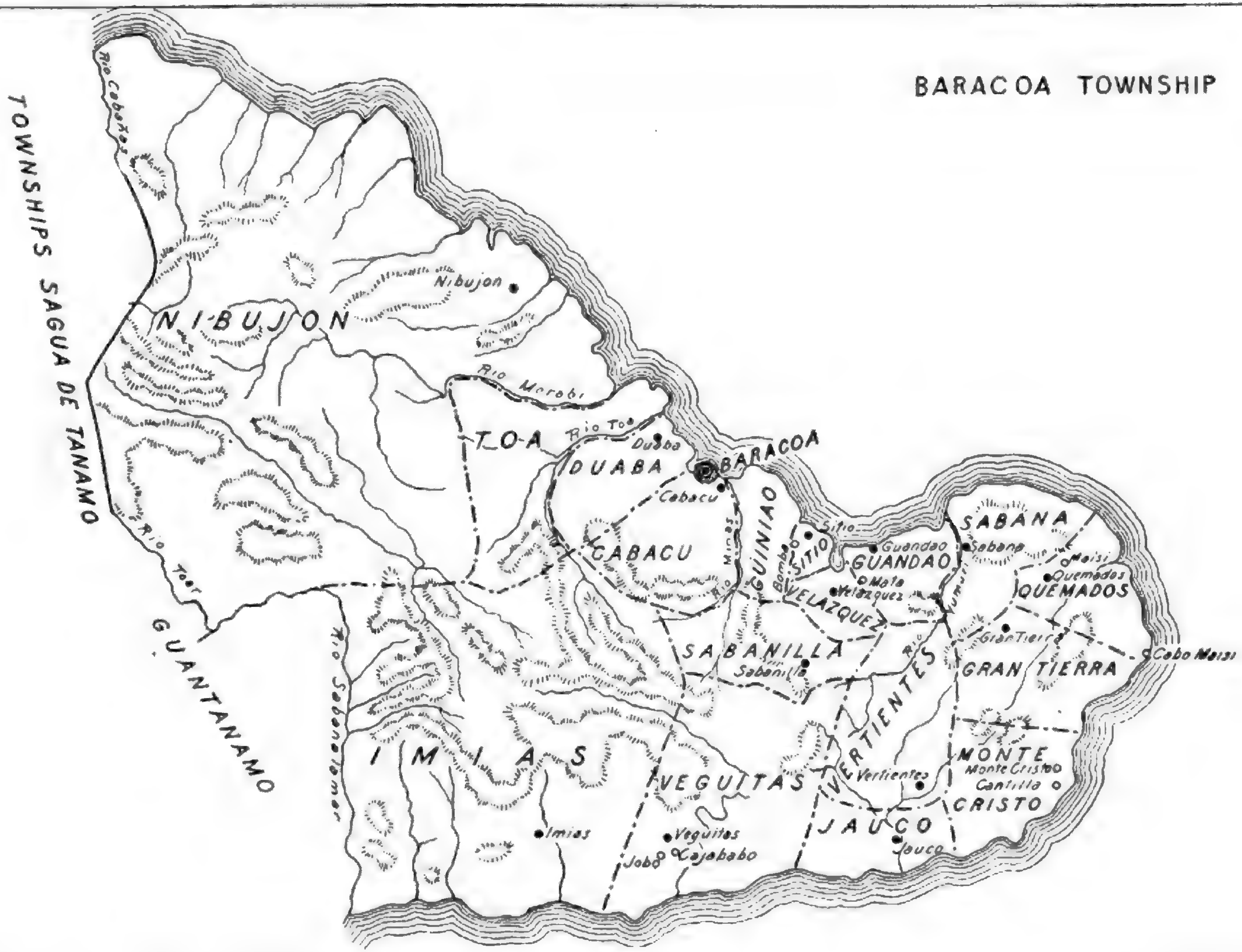
nship:	Population.
Baracoa	27, 852

TOWNSHIP OF BARACOA (CAPITAL, BARACOA).

vn, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
oa	Asunción	Urban		2,131
	Matachín	do		2,330
	Playa	do		1,171
ú	Cabacú	Rural	1	1,998
a	Duaba	do	3	1,434
Tierra	Gran Tierra	do	25	1,020
dao	Guandao	do	10	2,756
ata.				
arigua.				
de Miel	Güiniao	do	5	1,835
	Imías	do	32	910
	Jauco	do	24	1,986
Cristo	Monte Cristo	do	30.8	777
antilla.				
ón	Nibujón	do	17.5	947
aneta.				
oa.				
avas.				
ados	Quemados	do	20.8	1,038
aisí.				
a	Sabana	do	18	743
esta de Boruga.				
ueblo Viejo.				
illa	Sabanilla	do	7.5	1,776
	Sitio	do	7.5	696
oma.				
	Toa	do	8.7	732
tas	Veguitas	do	22.5	711
ajababo.				
bo.				
	Velázquez	do	10.1	2,399
ntes	Vertientes	do	22.5	461

aracoa.—Town. Baracoa is situated on the north coast, niles west of Cape Maisí. It is 705 miles from Havana 167 miles from Santiago de Cuba. There is a post-office telegraph station; the former receives its mail from ana and Santiago de Cuba on coastwise steamers which e stops twice a week, and the latter connects by wire with ntánamo via Imías on the south coast. Cocoanut oil is ufactured mainly for home trade, but the export trade

BARACOA TOWNSHIP



in bananas, cocoanuts, and cocoa to the United States in steamers, generally twice a week, is the industry of the place. The town is divided into three wards or barrios, viz: Asunción, Matachín, and Playa.

The climate is pleasant throughout the year, being cool in the summer on account of the prevailing winds from the northeast. The rainy season does not begin until October. In this part of Cuba the rainy season is from October to January, thus differing from the western portion of the island. Baracoa has a small, circular-shaped harbor, about two-thirds of a mile wide, into which all ships can enter, as there is 60 feet of water at its entrance; ships of great length would find trouble in turning, under their own steam, after entering. The town is very healthy. There has been no yellow fever since 1878, and there is very little malarial fever. Population, 5,633.

The water for the town is obtained from the Río Macaguanigua, about 1 mile west of the town, where there is a steam-pumping station. The capacity of this station is 1,700 gallons per hour. From here the water is pumped through one 6-inch pipe, one 3-inch pipe, and one 2-inch pipe to a reservoir on a near-by hill, which is about 150 feet above the river bed. The pipes leading from the pumping station are all above the ground. From the reservoir the water is brought to town through one 6-inch and one 3-inch pipe. The pumping station and reservoir can be reached by going west on calle de la Playa, crossing a small stone bridge (in the town), following the same street to the northwest until the Río Macaguanigua is reached, and then following the river to the west. The water is considered very pure.

There is no sewer system. The streets and houses are lighted by oil lamps.

Fort Seboruco and Fort Matachín are the only places where troops could be quartered with any comfort. The former, situated on the northern point of a ridge overlooking the town on three sides as well as the sea and harbor, has good, cool, sanitary quarters for 200 men, while in the latter, situated at the southern end of calle Real on the beach of Miel Bay, 100 men could be quartered. The water for these places is obtained from the town supply. A hot-air pump is at the foot of the hill at Fort Seboruco, and water is pumped about 225 feet to an 800-gallon tank on a hill above the quarters. It is piped to the kitchen, officers' quarters, and the men's shower and water closets. These closets have five seats, which are flushed into a 6-inch pipe draining into a bottomless cave at the foot of the cliff in rear of the closets. The closets at Fort Matachín consist of two seats, which are flushed by tide water.

There are no stables where more than two or three animals could be kept. One of this size is at Fort Seboruco.

There are no transportation corrals. Good open ground can be found at the Macaguanigua River, about half a mile to the west of the town, and at the Río Miel, about a mile to the south. These points are good watering places for any number of animals.

The only building available as a hospital is the old convent, situated near the light-house, but it is in poor repair and unsanitary at present. If thoroughly cleaned and put in good repair it is believed this building could accommodate about 100 beds. Water could be obtained by connecting with the town supply, the main pipe of which runs within 50 feet. Old dirt closets are now used, but modern closets could be built and drained to the sea which is within a few feet.

The warehouses of J. Simon & Co. are conveniently situated on calle de la Playa for use as commissary and quartermaster stores. These warehouses are at the shore end of a long wharf, from which a track for hand cars runs to all warehouses; 13,630 cubic yards can be stored in these houses. There are no railroads, sidings, or loading platforms.

The town hall is on calle Real, in the center of the town, opposite the church. The post-office is at calle Real, 43, and the telegraph station is at calle Real, 75. The custom-house is on calle de la Marina, which runs on the edge of a small cliff on the eastern side of the harbor.

The ice machine with a capacity of 600 pounds per day is on calle de la Playa.

The only camp site in the town is on the beach of Miel Bay, just east of the town. Five or six hundred men could be camped here and water for drinking, cooking, and washing purposes could be obtained from the town supply. There is no grazing ground at this point, and in fact there is none in the vicinity, but grass is grown in the near-by country and is brought into town for sale. Wood can be supplied from the country, but owing to the difficulty of transporting it over bad trails it is very dear, and it has been found cheaper to purchase charcoal. Closets could be built on the rocks and drained into the sea.

Forts Seboruco, Punta, and Matachín are of old Spanish construction and have no value as modern defenses.

There are no railroads.

Roads lead out of the town to the south via calle Real to Sabanilla, Imías, and Guantánamo; to the east via calle Real along the beach of Miel Bay to Boca de Miel, where roads branch to the east to Mata Bay, Yumurí, Sabana, and Cape Maisí, and to the south to Roble and Jamál; to the west via calle de la Playa to Rio Macaguanigua, where the road to the west along the river goes to El Yunque (Anvil Mountain), and the one crossing the river goes northwest to Duaba and Nibujón. These are all trails of the worst class, and during the rainy season they are nearly impassable even for native animals.

In case the town be defended, attack should be made from the south, owing to the fact that running in this direction is a long, high ridge which extends to within a thousand yards of the southern point, assisting to form the entrance of the harbor. This ridge tends to make the town take the form of an inverted L, with its eastern side on the sea and its northern side on the harbor. The ridge can be reached from the Sabanilla road. Owing to the commanding hills which extend for miles from all points of the town, except to the east, it would be very hard to defend it against trained troops.

Cabacú.—Barrio and village. The barrio is a rural district adjoining Baracoa to the south. The village is 1 mile south of Baracoa, where the Guantánamo-Baracoa trail crosses the Miel River. It has 3 stores and 10 houses. Population, about 60.

Duaba.—Barrio and village. On the north coast, west of Baracoa and adjoins the barrio of Toa (Toar). Besides the village of its name, it contains the fincas Majujabá, Boca de Toa, Sabana de Duaba, Tabajo, and Jaitecico, which produce many cocoanuts.

The village is 3 miles northwest of Baracoa and contains 2 stores, a school, 12 houses, and 100 people. It is on the Baracoa-Nibujón trail, and was a Spanish outpost, with 4 blockhouses commanding the ford of the Duaba River. It it connected with the Playa Toa by the Manuel Largo road.

Gran Tierra.—Barrio and sitio. The barrio is southeast of Baracoa on the south coast of the island, adjoining the barrios of Monte Cristo and Vertientes, and contains, besides the sitio bearing its name, the fincas Llanos, La Prieta, La Asunción, Siches, and Sanguijuela. It is one of the richest districts in Oriente, and produces cattle and coffee. Due to its situation on a high table-land it is very healthy, and is said to be free from all the usual diseases.

The sitio is about 25 miles by road from Baracoa, and contains a store and 8 houses, and has a population of 50.

Guandao.—Barrio and village. On the north coast southeast of Baracoa, adjoining the barrios of Sabana and Velázquez, and, besides the village bearing its name, contains the villages of Mata and Barigua.

The village is on the Baracoa-Sábana trail, on stream of same name, which flows into Mata Bay. It contains a bakery, 5 stores, and 14 houses, and has a population of about 175. It was a Spanish military post.

Mata.—Village. On Mata Bay, 9½ miles southeast of Baracoa. Has a store, 3 large cocoanut warehouses, and 9 houses. Population, about 70. Is a port of some importance, from which cocoanuts and bananas are shipped.

Barigua.—Village. Situated 12 miles southeast of Baracoa. Has 2 stores, a school, and 5 houses.

Güiniao.—Barrio. Situated southeast of Baracoa and adjoining the barrios of Cabacú and Sitio. The only point in the barrio to be noted is Boca de Miel.

Boca de Miel.—Sitio. Situated 1 mile southeast of Baracoa on the beach formed at the mouth of the Miel River. It is also known as the Playa Miel, and is the only place suitable for landing troops east of Baracoa. Consists of 7 or 8 scattered huts.

Imías.—Barrio and village. The barrio is on the south coast of Cuba, south of Baracoa. A coffee and cattle country, and also produces hard wood.

The village is on the Baracoa-Guantánamo trail, 32 miles by road from Baracoa, and contains a rural guard post, telegraph station (the only one between Baracoa and Guantánamo), school, and 18 houses. Population, about 125. Copper is being discovered here. It was a Spanish military post.

Jauco.—Barrio and village. A rural district south of Baracoa and on the south coast of the island, adjoining the barrio of Monte Cristo.

The village is at the mouth of the river of same name, and contains 4 stores, a school, and 14 houses. Population, about 150.

Monte Cristo.—Barrio and sitio. A rural district on south coast of Cuba, adjoining the barrios of Jauco, Vertientes and Gran Tierra, and containing, besides the sitio of its name, the village of Cantilla.

The sitio is at fork of Gran Tierra and Jauco Arriba trail and has 5 houses. A good camp site.

Cantilla.—Village. Situated 40 miles from Baracoa on trail through Sabana. It has 3 stores, a school, and 7 houses, and a population of about 80.

Nibujón.—Barrio and village. On north coast of the island, 17½ miles northwest of Baracoa and adjoining the town of Sagua de Tánamo on the west and the barrio of Duaba on the east. Besides the village of Nibujón, it contains the villages of Caneta and Navas, and sitio of Moa.

The village has 2 stores, a school, 8 houses, and population of about 80.

Caneta.—Village. Situated 30 miles from Baracoa on the north coast between Nibujón and Moa. Has 2 stores and 10 houses. Population about 90.

Moa.—Sitio. Situated at mouth of Moa Bay, 40 miles northwest of Baracoa. The location of a large tract of public land containing iron ore. It is populated chiefly by fishermen.

Navas.—Village. Situated 15 miles northwest of Baracoa at mouth of Navas River. Has 2 stores, 7 houses, and a population of about 80. The finca Naguaraje is at this point.

Quemados.—Barrio and sitio. Situated at the extreme east end of the island. The village of Maisí is in the barrio. The sitio bearing the name consists of 2 or 3 houses.

Maisí.—Village. Consists of the light-house of Cape Maisí, 3 coffee-cleaning mills, a store, a school, and 13 houses. Population, about 100. The light-house has a large cistern for rain water holding 40,000 gallons, and was a permanent garrison for a company of Spanish troops.

There is an anchorage behind the reef at Cape Maisí for small schooners or sloops; gives protection in ordinary rough weather. Entrance very narrow. From Maisí light-house, 180 feet above sea level, a good view of the surrounding country can be obtained.

There is a trail to Jauco joining the south coast trail to Guantánamo; and one to the north coast via Sabana.

Sabana.—Barrio and village. This barrio is also called Yumurí. It is on the north coast of the island, southeast of Baracoa. Many bananas raised here. It also contains the sitios Cuesta de Boruga and Pueblo Viejo.

The village of Sabana is 18 miles southeast of Baracoa, and has 5 stores, a school, a blacksmith shop, 50 houses, and a population of about 350. This village was once a large town, and has a church and city hall in ruins. It was a Spanish military post.

The Yumurí Fruit Tramway station is 21 miles southeast of Baracoa on Boruga Hill, at the mouth of the Yumurí River. From here bananas are lowered to the lighters at the water's edge on Yumurí Bay and shipped in steamers from Baracoa.

Cuesta de Boruga.—Sitio. Several houses on a hill of same name, on the east side of the mouth of the Yumurí River. It is an important pass to the Maisí table-land and was strongly fortified by the Spaniards.

Pueblo Viejo.—Sitio. A small settlement on the high table-land east of the Yumurí River, near Cape Maisí. Much coffee and many bananas are raised here, and the locality is very healthy. This is the location of an ancient Indian village and many interesting caves. There is a camp site.

Sabanilla.—Barrio and village. Situated south of Baracoa adjoining the barrios of Cabacú, Veguitas, and Velázquez.

The village is on the Baracoa-Guantánamo trail, 7½ miles south of Baracoa, and has 4 stores, a bakery, a school, 18 houses, and a population of about 150. Was a Spanish military post. Is an excellent camp site.

Sitio.—Barrio and sitio. Situated southeast of Baracoa and extending from Boma Bay to Mata Bay on north coast. Contains settlement bearing its name and village of Boma.

The point bearing the name consists of 5 houses on the Jamál-Roble trail. Low and marshy.

Boma.—Village. Situated on the east shore of Boma Bay, 8 miles southeast of Baracoa. Contains 2 stores and 10 houses. Two hand ferries cross Boma Bay. Population of Boma is about 60.

Toa (*Toar*).—Barrio. Situated on the river of the same name. Contains no settlement, but has a number of fincas extending along the river from its mouth upstream for 10 miles.

Veguitas.—Barrio and village. Situated south of Baracoa on the south coast and adjoining the barrios of Jauco, Imías, and Sabanilla. It contains places named Cajobabo and Jobo, besides village of same name.

The village is 22½ miles south of Baracoa. It has 2 stores, 11 houses, and a population of about 120.

Cajobabo.—Sitio. About 22 miles south of Baracoa, at a large cañon in the mountains, through which runs a small stream. The Baracoa-Guantánamo trail passes through this cañon.

Jobo.—Village. About 25 miles south of Baracoa via Veguitas, on the Jobo River. It has a store and 14 houses. Population about 150.

Velázquez.—Barrio. Rural district south of Baracoa, adjoining the barrios of Sitio and Sabanilla. Rich in fruit and cocoanuts. The village of Jamál is in this barrio, but there is no point bearing the name of the barrio.

Jamál.—Village. Situated 6 miles southeast of Baracoa. Has 2 stores, a school, 14 houses, and a population of about 200. It is near the Roble River, and is a good camp site.

Vertientes.—Barrio and village. Southeast of Baracoa and adjoining the barrios of Monte Cristo and Gran Tierra. The village is 22½ miles by road from Baracoa via Sabana. Has a store, a school, 8 houses, and a population of about 90.

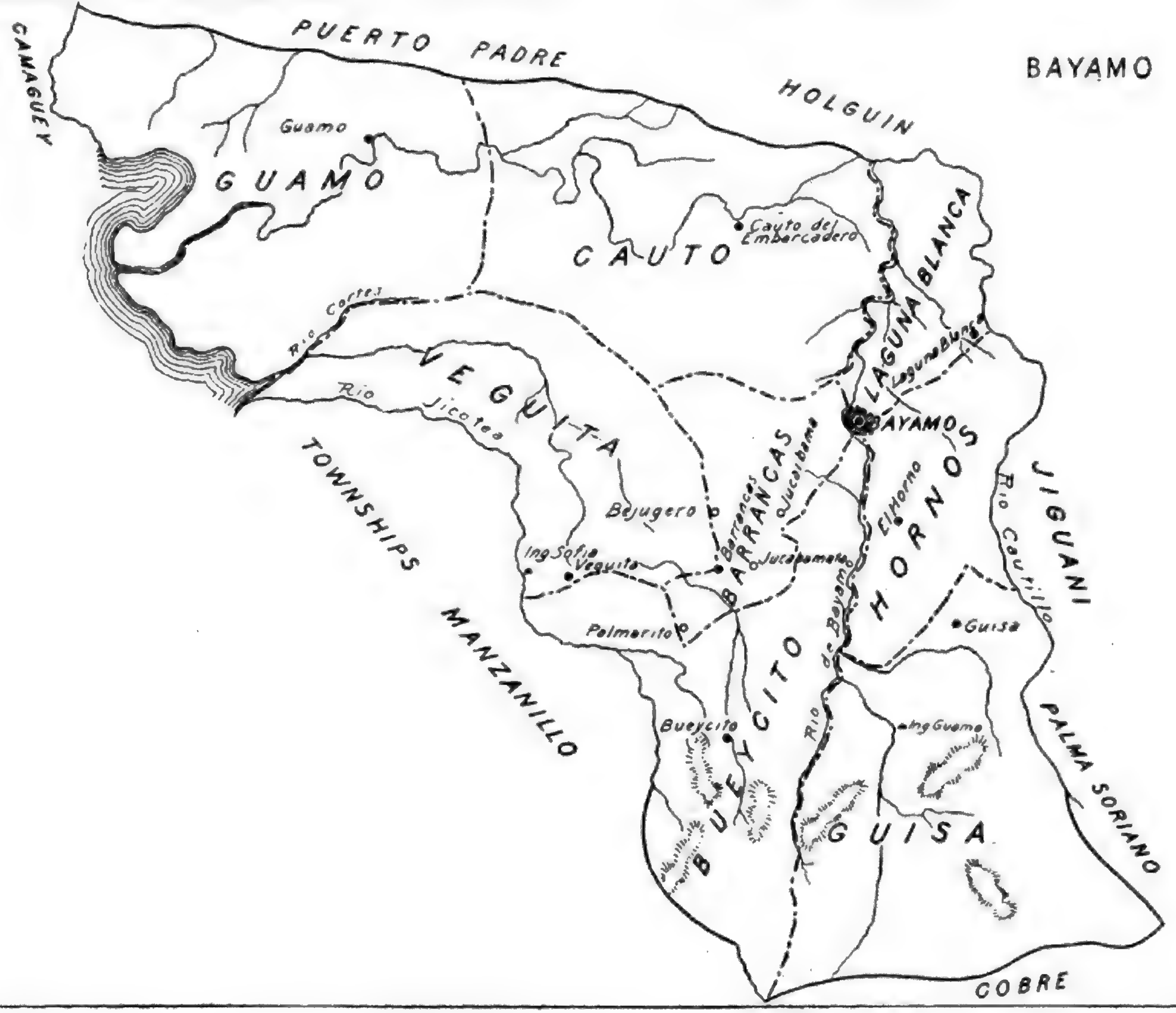
JUDICIAL DISTRICT OF BAYAMO.

Township:	Population.
Bayamo	26, 511
Jiguaní	13, 325

TOWNSHIP OF BAYAMO (CAPITAL, BAYAMO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Bayamo	Cristo	Urban		2,002
	San Juan	do		2,100
Barrancas	Barrancas	Rural	13.2	2,444
Jucabamata.				
Jucaibama.				
Humilladero.				
Bejugero.				
Palmarito.				
Sabanilla.				
Bueycito	Bueycito	do	16	3,285
Palmarito.				
Tinima.				
La Angostura.				
El Dorado.				
Solis.				
La Caridad.				
El Corojo.				
Cayo Redondo.				
San Pablo.				
Gallegos.				
Cauto	Cauto	do	17	2,037
Guamo	Guamo	do	28	1,235
Corralito.				
Guamito.				
Salado.				
Calabaza.				
Los Indios.				
Boca de Salud.				
Guisa	Guisa	do	13	3,819
Corralillo.				
Cautillo.				
Bon Bon.				
Hoyo de Pipa.				
Toronja.				
Guamá.				
El Horno	Hornos	do	6	2,863
Monjara.				
Santurio.				
Horno Arriba.				
Saltadero.				
Monteoscuro.				
Gallardo.				
Chapala.				
La Coaba.				
Corojo.				
Laguna Blanca	Laguna Blanca	do	6	2,221
Veguita	Veguita	do	19	4,505

Bayamo.—Town. A very old town, situated about 30 miles east of Manzanillo and 60 miles northwest of Santiago. Divided into 2 wards or barrios, viz, Cristo and San Juan. Most of the houses are one story and built of stone. The population is 4,102. Principal industries are cattle and tobacco raising. No sewer system. Kerosene lamps are



BAYAMO TOWNSHIP

used for lighting. Water is obtained from the Bayamo River by means of a pumping station and tank, which are in an old fort on the river bank.

There are 2 buildings which may be mentioned as suitable for barracks: (1) The public school building, San Juan street, between San Vicente and San Miguel streets; one story, brick building with tile roof; built on four sides of a courtyard: contains 12 rooms, with a total floor space of 16,530 square feet; in good repair and has good ventilation. City water piped to center of courtyard. Used by Spaniards as hospital in 1895–1898. (2) A building on the Cauto road, north edge of town. One story; built of brick; on two sides of a courtyard; needs some repairs. Has 2 large rooms suitable for quarters; capacity, 150 men. City water could be piped inside of building.

For a stable, there is a building on Yglesia street opposite the plaza; capacity, 25 animals. There is a stable for 14 horses, built along wall in courtyard of building described above as No. 2. The old fort at edge of town on Jiguaní road would shelter 100 animals.

On San José street, two doors from Comercio street, is a one-story brick building suitable for storehouse. It has a large room 20 by 60 feet, 4 rooms 10 by 20 feet, and a courtyard 100 by 40 feet. For a hospital there is a two-story building on Yglesia street opposite plaza; capacity, 25 to 50 beds; no modern closets. Post-office is on corner of Comercio and San José streets. Telegraph office is on corner of Yglesia and Mercedes streets. There is no railroad and no telephone system. An ice plant is being constructed (1907).

Across the river from the town is a good camp site, on the bank of the river. Water would have to be obtained from the river. There is fuel and grass.

The defenses are old and in a state of ruin. Consist generally of loopholed walls and buildings, but there is an old fort at the south edge of the town on the Jiguaní road and the bank of Bayamo River.

Two roads lead from the town to Manzanillo, one to Cauto, one to Juguaní, and one to Holguin.

The east side of town would be hardest to defend. Country surrounding is generally level. The Bayamo River is subject to freshets, which cut off the town from opposite side. It is not navigable. There is a ford three-fourths of a mile south of town, but it is passable by horses and artillery in dry season only.

Barrancas.—Barrio and village. The barrio lies southwest of the city of Bayamo.

It is well watered on account of the numerous small rivers and arroyos flowing through it. Along these waterways there is a good supply of timber. Farming is carried on, but only on a small scale. Native fruits are found in abundance. Stock raising is a growing industry. The general feature of this section is a broad expanse of savanna and swampy land through which flow many small rivers and creeks. Besides the village of Barrancas, the most important of the small settlements are: Jucabamata, Jucaibama, Humilladero, Bejugero, Palmarito, and Sabanilla.

The village is situated on the Manzanillo-Bayamo road, 13 miles west of Bayamo and on the Buey River. There are 15 native houses built on either side of the road, 2 small stores, and a small sawmill on the river. Population, 125. Water is obtained from the Buey River.

Jucabamata.—Sitio. Situated on the Manzanillo-Bayamo road, 2 miles east of Barrancas. Small settlement of 15 native houses and a schoolhouse. Population, 50.

Jucaibama.—Sitio. Situated on the Manzanillo-Bayamo road, 7 miles northeast of Barrancas. Small settlement of 12 native houses and a store.

Humilladero.—Sitio. Small settlement of about 25 people, situated 3 miles northeast of Barrancas. Six scattered houses and a store.

Bejugero.—Village. Small settlement of about 120 inhabitants and is situated 4 miles north of Barrancas. It has 20 native houses and 2 stores.

Palmarito.—Sitio. Small settlement of about 25 people, situated 5 miles southeast of Barrancas on the boundary line between Barrancas and Bueycito barrios. It has 5 native houses and a store.

Sabanilla.—Sitio. Small settlement having 15 native houses. Population estimated at 50.

Bueycito.—Barrio and village. The barrio lies 14 miles southwest of the city of Bayamo. There are numerous small villages, and most of them are situated on the rivers. On account of the many rivers and small streams it is well adapted to agriculture. Agriculture is the most important industry, but it is retarded considerably by the poor roads, the people having great difficulty in getting the products to a market. Stock raising is the industry next in importance to agriculture. Every family owns from one to five saddle horses, and cattle are scattered throughout, on large and small ranches.

In the mountains to the south there is a copper and mangenese mine owned and operated by an American company, and it is reported that there are large deposits of these minerals in the mountains.

The most important of the rivers which rise in the Sierra Maestre Mountains and flow northwest through this barrio are Bayamo, Yao, Buey, and Jicotea, the water from all of them being excellent for drinking.

The most important points in the barrio, besides the village bearing its name, are Palmarito, Tinima, La Angostura, El Dorado, Solis, La Caridad, El Corojo, Cayo Redondo, San Pablo, and Gallegos.

The village of Bueycito is situated about 16 miles southwest of the city of Bayamo, on the Buey River. There are six streets running at right angles. The place has 6 frame houses with sheet-iron roofs, a small brick house, about 25 houses of native construction, 3 stores, a bakery, a school, and a post-office. Mail arrives from and departs to Bayamo once a week. Water from the Buey River; unlimited supply at all seasons. Population, 100.

Palmarito.—Village. Situated on the Buey River about 3 miles northwest of Bueycito. A scattered settlement of about 15 families, the central point of the village consisting of 10 houses surrounding a small store on the Buey River. There is one other store in the village. Water from Buey River. There is a small settlement on opposite bank of the river which bears the same name, but belongs to barrio of Barrancas. Wagon road to Barrancas and Bayamo.

Tinima.—Sitio. Situated about 3 miles northwest of the village of Bueycito. It has 4 palm houses and a population of about 25. Wagon road to Barrancas and Bayamo.

La Angostura.—Village. Situated about 3 miles north of the village of Bueycito, on the Yao River. It is a scattered settlement of 15 families, 5 of which are in a group. Houses are all of palm. Water from the Yao River; unlimited supply at all seasons. Farming on a small scale. Wagon road to Barrancas and Bayamo.

El Dorado.—Village. Situated about 4 miles by road northeast of the village of Bueycito. Scattered settlement of about 75 houses, all of palm construction, and a small store. Population, about 300. Water obtained from Arroyo Banatuba; reported to be good to drink. Wagon road to Barrancas and Bayamo.

Solis.—Sitio. A widely scattered place, which it is impossible to definitely locate, from 8 to 10 miles by road northeast of the village of Bueycito. There is a small store on the El Dorado-Bayamo road 2 miles northeast of the former point. The vicinity is densely wooded. Wagon road to Bayamo and Barrancas.

La Caridad.—Village. Settlement of 100 native houses situated 9 miles east of village of Bueycito. It has a store and a school. Population about 400. Water from wells and from small arroyo running near.

El Corojo.—Village. Situated on the Bayamo River about 15 miles east of the village of Bueycito. Native settlement of about 100 native houses, 3 small stores, and a school. Excellent camp site for a battalion. Unlimited supply of water in the Bayamo River. Trail from El Corojo connecting with wagon road to Bayamo and Barrancas.

Cayo Redondo.—Sitio. Consists of 3 or 4 native huts and a small store situated 6 miles southeast of Bueycito. Wagon road to Bueycito.

San Pablo.—Sitio. Consists of 3 or 4 native huts and a small store situated 7 miles southeast of Bueycito.

Gallegos.—Sitio. Consists of a few native houses and a store situated 9 miles southeast of Bueycito.

Cauto.—Barrio and village. A small village situated about 17 miles northwest of Bayamo. Population about 150, mostly colored. There are no wharves, and the landing place is poor. Telegraph station and telegraph line to Bayamo. Roads fair in dry weather. Wagon road connecting with Bayamo. Good cattle district and good pasturage.

Guamo.—Barrio and village. The barrio lies northwest of the city of Bayamo and on the Cauto River. The country is not well developed and there are no industries, the people raising only enough vegetables and fruit for their own personal use. Stock raising is a growing industry. The most important settlements besides the village of Guamo are Corralito, Guamito, Salado, Calabaza, Los Indios, and Boca de Salud.

The village of Guamo is on the Cauto River, about 28 miles northwest of Bayamo. Population, about 325. It has 60 houses, a school, 6 stores, telegraph office having connection with Cauto and Bayamo, and a post-office. There is one street running parallel to the river, and a steamboat landing, rudely constructed and of no consequence, as the steamer comes up to the bank. Water from river and wells.

Corralito.—Village. Situated on the Cauto River, about 5½ miles east of Guamo. It has a store, 12 native huts, and a steamboat landing.

Guamito.—Sitio. Small settlement situated 1½ miles south of Guamo. Consists of a small store, 6 native houses, and a small sawmill belonging to the Cuba Company Railroad.

Salado.—Village. Situated about 6 miles northeast of Guamo, on the Salado River. Consists of 1 frame house (store) and 12 native houses. There is a trail to Guamo.

Calabaza.—Sitio. Situated 6 miles south of Guamo, and has 8 native houses.

Los Indios.—Sitio. Situated about 22 miles northwest of Bayamo and 6 miles south of Guamo, and consists of 5 houses of native construction.

Boca de Salud.—Sitio. A settlement consisting of 6 native houses, situated 2 miles north of Guamo.

Guisa.—Barrio and village. The barrio lies southeast of the city of Bayamo. This barrio is one of the largest and most densely populated barrios of Bayamo. It lies at the foot of the Sierra Maestra Mountains in the midst of the foothills, the slopes of which are covered with the most valuable of the hard woods of the island. According to the figures of the alcalde of the barrio, there are 6,000 cattle, horses, and sheep registered. Aside from the fertility of the soil and abundance of timber, it is reported that there are large deposits of manganese and copper in the mountains. Tobacco growing seems to be the largest industry of the barrio. The most important settlements in the barrio besides the village of Guisa are Corralillo, Cautillo, Bon Bon, Hoyo de Pipa, Toronja, and Guamá.

The village of Guisa is situated 13 miles southeast of Bayamo. It contains 100 houses, 12 of which are built of wood or brick, with tile roofs. The town has a number of streets, four running northeast and southwest and five running northwest and southeast. In the center is a plaza on which stands the ruins of an old church, which was destroyed in the revolution of 1895. There are 2 bakeries and 4 stores. Entirely surrounded by hills rańging from 100 to 200 feet in height, any one of which commands the town or its approaches. Excellent water is obtained from two arroyos within 100 yards of the town. Population, about 523.

Corralillo.—Village. Situated 2 miles east of Guisa. Consists of 200 scattered houses (4 of which are of brick), 4 stores, and a school. Population, about 1,000.

Cautillo.—Village. Situated 5 miles east of Guisa, on the river Cautillo. Consists of 5 stores, a school, and 200 houses, 4 of which are built of brick, the remainder being of native construction.

Bon Bon.—Village. Situated 3 miles southeast of Guisa. Consists of 100 native houses, 2 stores, and a school. Population, about 600.

Hoyo de Pipa.—Village. Situated 1½ miles west of Guisa. Consists of 50 native houses, a brick house, and a store. Population, about 250.

Toronja.—Village. Small settlement of about 50 people, situated 9 miles southeast of Guisa. Consists of 15 native houses.

Guamá.—Village. Settlement of about 100 inhabitants surrounding the Guamá sugar mill, which is situated 5 miles south of Guisa, on the Guisa River. There are 30 native houses, besides frame buildings near mill. Sheds for 30 animals. Water obtained from Guisa River.

Hornos.—Barrio and village. The barrio lies southeast of Bayamo. Truck gardening for Bayamo market seems to be the most important industry. Native fruits are found in great abundance. The most important settlements in the barrio besides the village of El Horno are: Monjara, Santurio, Horno Arriba, Saltadero, Monteoscuro, Gallardo, Chapala, La Coaba, and Corojo.

The village is situated on the Bayamo-Guisa road, 6 miles southeast of Bayamo. Consists of 15 native houses built on both sides of the road, 1 medium-sized mampostería building, and 2 stores.

Monjara.—Village. Settlement of about 100 inhabitants, situated 3 miles southwest of El Horno and 7½ miles southeast of Bayamo. Consists of 18 native houses and 1 store. Wagon road to Bayamo and El Horno.

Santurio.—Sitio. Small settlement of about 30 people, situated 1 mile north of El Horno. Consists of 10 native houses. Wagon road to El Horno and connecting with calzada to Bayamo.

Horno Arriba.—Village. Situated 1 mile east of El Horno and 6½ miles southeast of Bayamo. Consists of 36 native houses, 1 store, and 1 school. Population, about 160. Cart road to El Horno.

Saltadero.—Sitio. Small settlement of about 25 people, situated 1½ miles east of El Horno and 7 miles southeast of Bayamo. Consists of 8 native houses. Cart road to El Horno.

Monteoscuro.—Sitio. Situated 1½ miles southwest of El Horno and 6½ miles southeast of Bayamo. Consists of 15 native houses. Population, about 75. Wagon road to El Horno and Bayamo.

Gallardo.—Sitio. Small settlement of about 50 people, situated 4½ miles southeast of El Horno and 10 miles southeast of Bayamo. Consists of 10 native houses. Cart road to El Horno.

Chapala.—Sitio. Small settlement of about 40 inhabitants, situated 2½ miles northeast of El Horno, on calzada to Bayamo. Ten native houses.

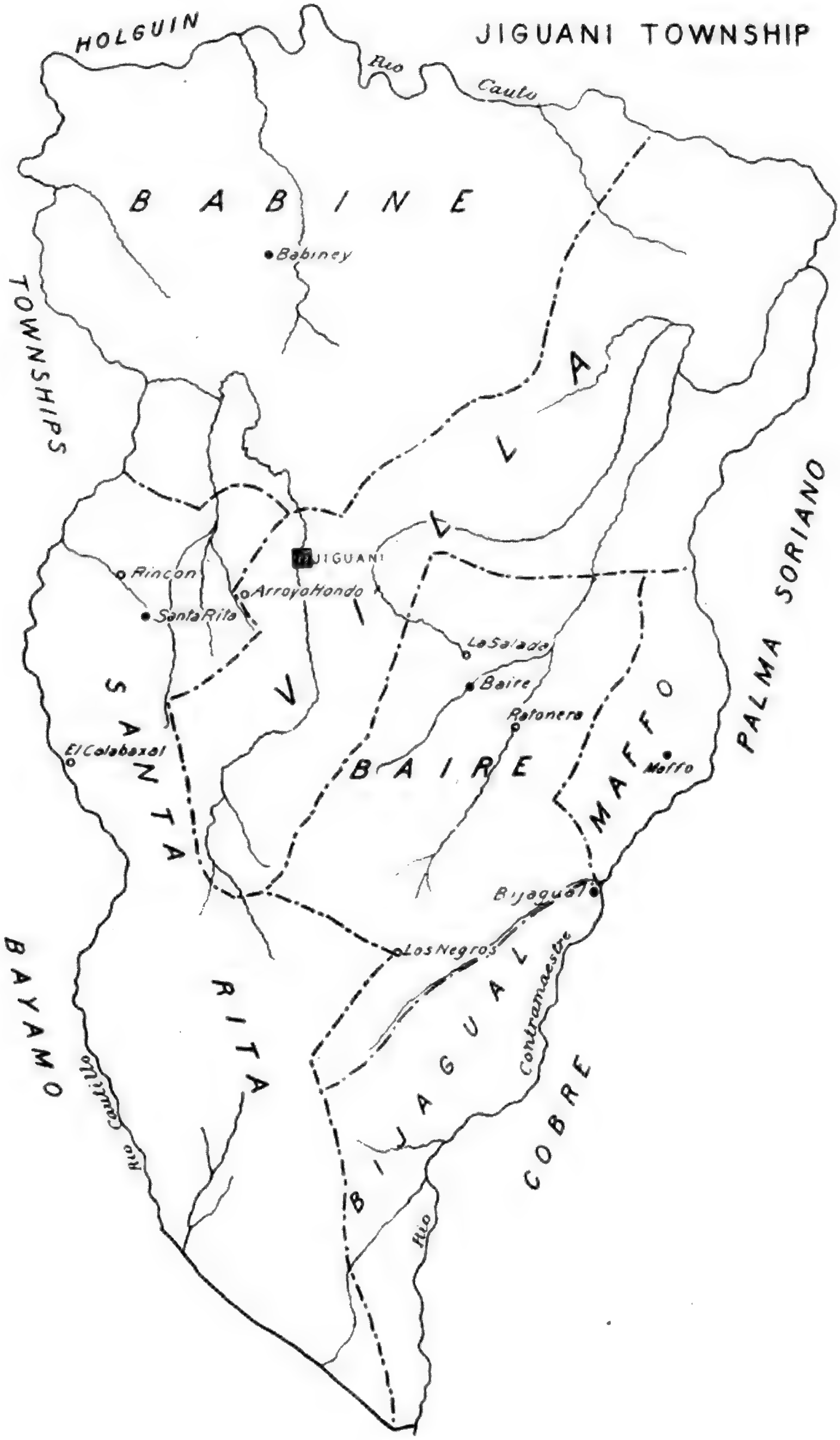
La Coaba.—Sitio. Consists of 15 native houses. Population, about 60.

Corojo.—Village. Situated 3 miles southeast of El Horno. Consists of 1 store and 20 native houses, which are somewhat scattered. Population, about 150.

Laguna Blanca.—Barrio and sitio. The barrio lies northeast of the city of Bayamo. The inhabitants are scattered throughout the barrio on small farms or ranches. A collection of houses or a settlement is an exception. It is estimated that there are 700 buildings of all kinds. The sitio consists of but 2 houses, situated 6 miles northeast of Bayamo and three-fourths of a mile west of the Bayamo-Holguín road. Water is obtained from a well.

Veguita.—Barrio and town. Situated on Manzanillo-Bayamo road, about 19 miles from Bayamo, slightly south of east, and on Buey River. Population, 1,012. Water is obtained from the Buey River and hauled to houses; quantity unlimited and the quality good.

Buildings are mostly one-story, native huts. Few are frame, with tile or corrugated-iron roofs. There are but two considered suitable for barracks. They are as follows: (1) Corner of General Rabí and Yglesia streets; one-story, brick, tile roof, front porch, large doors and windows; in good condition; capacity, about 50 men; water from river. (2) Quarters now occupied by rural guard; capacity, about 40 men. There are several small dwellings on the main street near rural guard barracks, one of which would be suitable for hospital; capacity, 25 beds. No buildings especially suitable for storehouses. Several small private stables for animals. Post-office and telegraph office on General Rabí street, near center of town. Telegraphic communication with Bayamo and Manzanillo. There is a good ford over the Buey River at this point, and also one over the Yara River, about 5 miles south. Barrio contains central Sofía.


JIGUANI TOWNSHIP
HOLGUIN
Rio
Cauto
B A B I N E
Babiney
TOWNSHIPS
A
L
L
I
V
JIGUANI
Rincon
Arroyo Hondo
Santa Rita
La Salada
Baire
Ratonera
S A N T A
B A I R E
El Calabazal
M A F F O
Maffo
PALMA SORIANO
Bijagual
Los Negros
B I J A G U A L
Contramaestre
R I T A
BAYAMO
Rio Cautillo
Rio
COBRE

TOWNSHIP OF JIGUANÍ (CAPITAL, JIGUANÍ).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital. Miles.	Population.
Jiguaní Arroyo Hondo. Cruz Alta. Las Bocas. Guayacán. El Manantial. Palma. Paso Viejo. Resbaloso. El Retiro. Santa Cruz.	Villa (Jiguaní)	Urban and rural.	....	3,064
Babiney La Campaña. Las Mercedes. Pozo Viejo. La Yaya.	Babiney	Rural	10	2,166
Baire Los Negros. Paso Seco. Pedernales. Ratonera. Salada.	Baire	...do	8	2,911
Bijagual Comecara. La Yayal.	Bijagual	...do	9	1,122
Maffo Marvío. Viajacas.	Maffo	...do	15	1,420
Santa Rita El Cacao. El Calabazal. Cienfuegos. Cuatro Caminos. Cupeisito. Rincón.	Santa Rita	...do	5	2,642

Jiguaní.—Town. The town is in Villa barrio, 44½ miles northwest of Santiago de Cuba and 14 miles east of Bayamo. The town is situated on a small plain between the Jiguaní River and the Loma del Jiguaní. It occupies about three-fourths of a square mile. The streets were formerly macadamized, but are in bad state of repair. Many of the houses are one-story brick, tile roof, and in fair state of repair. There are a few one-story frame houses with tin and corrugated-iron roofs. The outlying dwellings are thatched huts. A general distributing point for all general merchandise coming by way of Bayamo and Manzanillo for the Jiguaní municipality. Population, 1,362.

The river Jiguaní furnishes the water supply for the town. The river has its source at La Rinconada, about 4 miles south of Jiguaní, from springs at the base of the Sierra del Mato. In the dry season it has a volume of 150 cubic feet per minute, which in the rainy season increases from five to ten times. Five-sixths of the volume of the stream comes from springs which have a watershed of forest and mountain. The rest of the watershed through which the stream flows is open grazing ground, with a small acreage of corn and bananas. This is one of the few streams in this district that is not saline. The water for natives is obtained from the river, north of the bridge on the west side of town, and distributed by means of pack animals. Water at this point may be contaminated by fecal matter from houses in southwest section of the town. Pure water may be obtained from a point on the Jiguaní-Baire road. A small inclosed pasture, 70 yards north of this point, is the best place to water animals.

No sewer system. No systematic method of disposing of garbage. Lighted by oil.

Rural guard barracks, on south side of plaza, is a building 240 by 30 feet; brick, one-story, tile roof, tile floor; fair state of repair; no water system. Buildings suitable for barracks are situated on the other three sides of the plaza; description similar to rural guard barracks; contain stores, hotel, etc. Sanitary condition of all, fair.

No stables. Excellent pastures north of town.

No transportation corrals. Suitable open ground north of town along the Juguaní River; grass, fuel, and water good and in abundance.

No hospital in town. Only building suitable is a small two-story brick house opposite northwest corner of plaza; good condition; sanitary condition fair; capacity, 20 beds, with suitable room for operating room upstairs. No running water or modern closets.

Four large frame stores, corrugated-iron roofs, in excellent repair, on both sides of street leading south from the southeast corner of the plaza, would furnish suitable buildings for quartermaster and commissary storehouses. No railroad or tramways.

No railroad station. Post-office and telegraph office in same building, situated opposite southwest corner of plaza. Two lines west to Bayamo and same number east to Baire, Palma Soriano, San Luis, and Santiago. No telephone.

Camp site on Jiguaní River south of town, area about 1½ square miles; excellent water in inclosed pasture. One north of town along Jiguaní River; good, except for water, which is contaminated by drainage from the town; area about 3 square miles; pasturage excellent. These two camp sites are on level ground, with no slope and a heavy gumbo soil.

Stone fort situated 500 yards east of town on hill commanding the town and surrounding country. Is an irregular polygon; area about 280 square yards; in bad state of repair. Walls about 3 feet thick. No water inside.

There are five roads leading out of town: (1) The Jiguaní-Holguín road leaves town to the north. (2) The Jiguaní-Dos Ríos road leads to the northeast and passes around north side of stone fort; suitable for ox carts. The same road branching north of stone fort leads east to Venta de Casanova. This is the old Santiago-Bayamo road and is in very bad repair, being suitable only for pack animals. (3) To the south leads the Jiguaní-Baire-Palma Soriano-San Luis-Santiago road, from the southeast corner of the plaza. This road is called the new Santiago-Bayamo road and is in excellent repair; suitable for wheel transportation. (4) From the southwest end of the plaza and crossing the Jiguaní River over a wooden bridge leads the main road to Bayamo; suitable for ox carts. (5) From the northwest corner of town leads the road to Babiney; good earth road and suitable for wheel transportation in dry season, but bad in wet season and suitable only for pack transportation.

The best line of approach is by way of the Dos Ríos-Jiguaní road from the northeast. This road passes over broken and irregular ground that is very nearly the same level as that upon which the stone fort stands. The brick buildings around the plaza form an excellent supplementary defense west of the fort and are commanded by it. The Jiguaní River west of town is impassable in time of flood.

Villa barrio contains, besides the municipal capital, a number of unimportant points. The following list contains the names of most of them: Arroyo Hondo, Cruz Alta, Las Bocas, Guayacán, El Manantial, Palma, Paso Viejo, Resbaloso, El Retiro, Santa Cruz, Julia González, Guaranal Jutal, La Loma, San Rafael, San Francisco, Rosal, and part of Ventas. Descriptions are given below of the first ten named. Those not described are farms or localities having but a few scattered huts.

Arroyo Hondo.—Sitio. Situated 4½ miles southwest of Jiguaní on the wagon road connecting Santa Rita and

Bayamo. It consists of 5 native houses and has an estimated population of 40.

Cruz Alta.—Village. Situated 1½ miles southeast of Jiguaní and consists of 12 native houses; estimated population 90.

Las Bocas.—Sitio. Situated 13 miles northeast of Jiguaní and consists of 4 native houses.

Guayacán.—Sitio. Situated 14 miles almost due north of Jiguaní and connected therewith by calzada, which at this place forms a junction with the calzada skirting the Río Cauto. The place consists of 3 native houses and has an estimated population of 12.

El Manantial.—Village. Situated 3 miles north of Jiguaní and consists of 20 guano houses and a store; estimated population of 170.

Palma.—Sitio. Situated 8 miles northeast of Jiguaní. Consists of 3 guano houses.

Paso Viejo.—Sitio. Situated 20 miles by road northwest of Jiguaní on the calzada skirting the Río Cauto. The calzada at this point turns south, running to Jiguaní. The place consists of 2 guano houses.

Resbaloso.—Village. Situated 12 miles east of Jiguaní, near Contramaestre River. Consists of 40 guano houses and 2 stores; estimated population, 300.

El Retiro.—Sitio. Situated 1 mile west of Jiguaní and consists of 2 guano houses.

Santa Cruz.—Sitio. Situated 6 miles north of Jiguaní, on wagon road running from the latter place to the Río Cauto road. It consists of 8 guano huts; about 60 inhabitants.

Babiney.—Barrio and village. Besides the village of the same name the barrio includes the sitios La Campaña, Las Mercedes, Pozo Viejo, and La Yaya.

The village of Babiney is situated 10 miles northwest of Jiguaní and 13 miles northeast of Bayamo. It consists of about 15 houses. Wagon road north to Paso Viejo and Cauto Cristo, and southwest to Bayamo, connecting with wagon road to Jiguaní.

La Campaña.—Sitio. Consists of one house situated 5 miles northwest of Jiguaní and 5 miles southeast of Babiney. Water obtained from well. Wagon roads to Jardín, La Concepción, El Pozo, and Jiguaní.

Las Mercedes.—Sitio. Consists of 2 houses situated 1½ miles southwest of Babiney. Wagon roads northeast to Babiney and southwest to Bayamo.

Pozo Viejo.—Sitio. Consists of a house situated 3½ miles north of Babiney. Wagon road south to Babiney and one north to Cauto Cristo.

La Yaya.—Sitio. Consists of several houses, situated 6 miles northeast of Babiney. Wagon roads west to Pozo Viejo, south to Jiguaní, and east to Dos Bocas.

Baire.—Barrio and town. The barrio contains, besides the town of the same name, the following sitios: Los Negros, Paso Seco, Pedernales, Ratonera, and Salada.

The town is situated 8 miles southeast of Jiguaní and 54 miles northwest of Santiago. Population, 900. Water is obtained from Arroyo Baire, one-half mile southeast of town and carried to the town on pack animals; quality poor and quantity limited. Most of the buildings are huts having thatched roofs; about one dozen one-story frame buildings with corrugated-iron roofs. About one platoon could find quarters. No good camp sites near the town owing to poor water. Public telephone and post-office. Most easily reached from Santiago via San Luis and Palma Soriano. Earth road from San Luis passable by wagons in dry season. Also reached from Bayamo via Jiguaní by earth road passable by wagons in dry season.

Los Negros.—Village. Consists of about 20 houses situated 6 miles south of Baire. Cart roads lead to Baire, Purial, Paso Seco, La Alegría, and Manacas.

Paso Seco.—Sitio. Consists of 2 houses situated about 5 miles southeast of Baire. Cart roads lead to Maffo and Baire.

Pedernales.—Sitio. Consists of several houses situated 1 mile southeast of Baire. Wagon road to Baire and Ratonera.

Ratonera.—Sitio. Consists of several houses situated 2½ miles southeast of Baire. Wagon roads lead to Baire, Marvío, and Maffo.

Salada.—Sitio. Consists of a house situated 2 miles northwest of Baire. Calzada to Baire and calzada connecting with wagon road to Jiguaní.

Bijagual.—Barrio and sitio. The barrio is situated about 9 miles southeast of Baire, and contains also the sitios Yayal and Comecara. The sitio of Bijagual consists of a few houses.

Comecara.—Sitio. A store situated 10 miles southeast of Baire, on cart road from Yayal and Los Negros.

La Yayal.—Sitio. Consists of a house situated about 8 miles southeast of Baire. Cart road to Los Negros and Comecara.

Maffo.—Barrio and sitio. Besides the sitio of the same name, the barrio contains the sitios Viajacas and Marvío. Much tobacco cultivated in the barrio. The sitio Maffo consists of several houses situated about 9 miles southeast of Baire on the wagon road to Palma Soriano and 15 miles southeast of Jiguaní.

Marvío.—Sitio. Consists of several houses situated about 3 miles northeast of Maffo. Wagon road to Baire and Lajas.

Viajacas.—Sitio. Consists of 2 houses situated 5 miles southeast of Baire. Cart roads to Baire, Los Negros, Marvío, and Maffo.

Santa Rita.—Barrio and village. Besides the village of the same name, the barrio contains the sitios El Cacao, El Calabazal, Cienfuegos, Cuatro Caminos, Cupeisito, and Rincón.

The village of Santa Rita is situated about 5 miles southwest of Jiguaní. Population, about 400. There is a wagon road connecting with calzada to Bayamo, wagon road to Jiguaní, and another south from Santa Rita, branching west to Guisa.

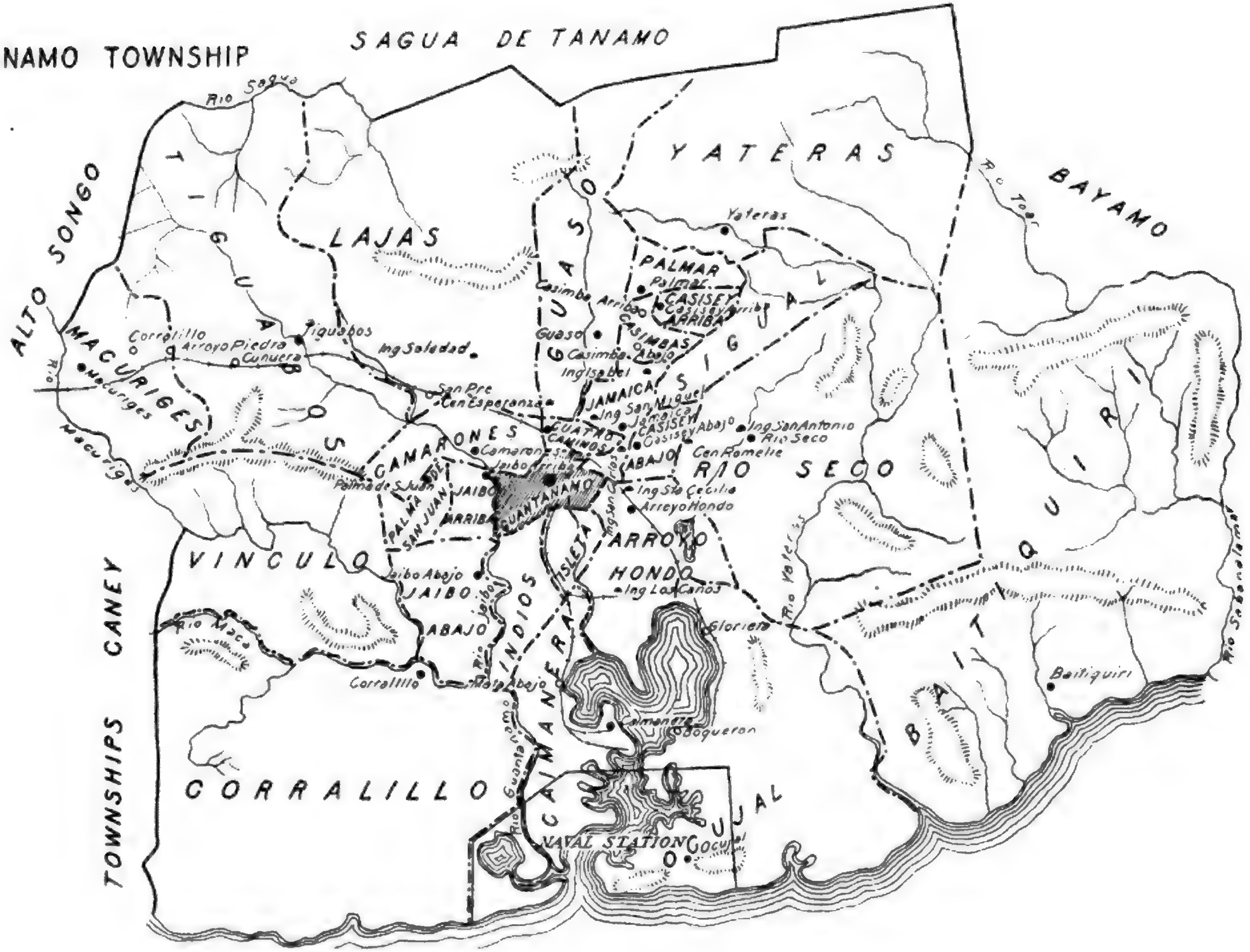
El Cacao.—Sitio. Situated 7 miles south of Jiguaní and consists of 2 houses. Cart road east to Purial, and one west connecting with wagon road to Santa Rita.

El Calabazal.—Sitio. Situated 3 miles south of Santa Rita and consists of about 10 houses. There is a wagon road north to Santa Rita and one southwest to Guisa.

Cienfuegos.—Sitio. Situated about 3 miles southwest of Santa Rita, and consists of several houses. Cart road to Calabazal, trail to Santa Rita, and cart road north to wagon road, one mile from and connecting with calzada to Bayamo.

Cuatro Caminos.—Sitio. Situated about 6 miles southeast of Santa Rita, and consists of 3 houses. Cart road east to Cacao and one west connecting with wagon road to Santa Rita.

GUANTANAMO TOWNSHIP



Cupeisito.—Sitio. Situated 3½ miles northwest of Santa Rita, and consists of 2 houses. Water obtained from a well. Wagon road to Santa Rita.

Rincón.—Sitio. Situated about 1½ miles northwest of Santa Rita, and consists of 5 houses. Water obtained from a well. There is a cemetery just south of the place. Cart road connecting with wagon road to Santa Rita.

JUDICIAL DISTRICT OF GUANTÁNAMO.

Township:	Population.
Guantánamo	43, 300
Sagua de Tánamo	8, 398

TOWNSHIP OF GUANTÁNAMO (CAPITAL, GUANTÁNAMO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Guantánamo	Baño	Urban		2, 197
	Caridad	do		1, 154
	Glorieta	do		3, 503
	Gobierno	do		1, 217
	Hospital	do		2, 085
	Mercado	do		1, 564
	Parróquia	do		2, 332
	Rastro	do		507
Arroyo Hondo	Arroyo Hondo	Rural	7	1, 517
Baitiquirí	Baitiquirí	do	40	311
Caimanera	Caimanera	do	12	1, 012
Camarones	Camarones	do	3	822
Casimba Abajo Casimba Arriba.	Casimbas	do	7. 5	927
Casisey Abajo	Casisey Abajo	do	5	582
Casisey Arriba	Casisey Arriba	do	10	659
Corralillo	Corralillo	do	10	818
Cuatro Caminos	Cuatro Caminos	do	4	300
Guaso	Guaso	do	7	1, 544
Mata Abajo	Indios	do	2	406
	Isleta	do	2. 3	247
Jaibo Abajo	Jaibo Abajo	do	1	861
Jaibo Arriba	Jaibo Arriba	do	4	219
Jamaica San Vicente.	Jamaica	do	5. 5	2, 391
San Pré Santa Fé. San José. Santa María.	Lajas	do	9. 3	2, 054
Macuriges Belona. Corralillo.	Macuriges	do	24	1, 016
Ocujal Boquerón. Glorieta.	Ocujal	do	18	254
Palmar	Palmar	do	10	1, 134
Palma de San Juan Maguecillo.	Palma de San Juan	do	5	1, 043
Río Seco	Río Seco	do	10. 5	1, 915
Sigual Abajo Sigual Arriba.	Sigual	do	12	1, 124
Tiguabos Cunuera.	Tiguabos	do	13	3, 518
	Vínculo	do	12. 3	1, 773
Yateras	Yateras	do	18	2, 294

Guantánamo.—Town. The town is situated 8 miles north of Joa Bay (the northern portion of Guantánamo Bay) on the west bank of the Guaso River and about 52 miles by road northeast of Santiago. The north side of town reaches nearly to the junction of the Bano and Guaso rivers. The most important town of the Guantánamo Valley. Its seaports are Boquerón, the eastern terminus of the Cuba Eastern Railroad on the east side of Guantánamo Bay, and Caimanera, on the west side of Guantánamo Bay, which is the southern terminus of the Guantánamo Railroad. It is regularly laid out in square blocks with broader streets than usually prevail in Spanish cities, and is divided into 8 wards or barrios. The site is generally level, though sufficiently rolling to give good drainage; the level of the town is 20 to 30 feet above the normal height of water in the river. About one-quarter of the streets are macadamized. Those that are not are apt to become impassable for wheel transportation. The buildings with few exceptions are of wood, about half of the principal business buildings being covered with tile and all of the other buildings covered with corrugated iron, except those around the outskirts of the town, which have thatched roofs. By far the greater portion of the buildings are one story, though two-story buildings are common in the heart of the business section. The principal industry of the surrounding country is the manufacture of sugar.

The population consists of merchants and laborers who depend upon the surrounding country. The town is the headquarters of two railroad systems; the Guantánamo Railroad, which has its shops and offices in the town, and the Cuba Eastern Railroad, which has its headquarters office in the town, but not its shops. Here are situated also the headquarters office of the Guantánamo Sugar Company and various other small sugar companies' offices.

Population, 14,559. The town has almost doubled in size in the last five years. The negro population forms a very large percentage of the total.

Water supply: Obtained from the Guaso River, about 9 miles north of the city, near the place where the river comes out of an underground channel like an enormous spring. There being practically no watershed where animal or vegetable impurities can find their way to the water supply it is consequently pure—undoubtedly one of the purest sources in the island. It is of excellent quality and is brought to the town through a 12-inch iron main which follows in general the course of the Guaso River; is distributed to all parts of the town by smaller mains and leads. The system was put in by the Americans during the first intervention. Quantity: All that will flow through a 12-inch pipe with a fall of about 200 feet in 9 miles. Animals may be watered at the rural guard stables or at the crossing of the river on east side of town. Fire plugs are distributed throughout the town.

Sewerage and lighting: No sewer system exists; fecal matter is drawn from cesspools by odorless excavators and disposed of in river below town. Street sweepings are carried out by wagons and deposited by roadside or thrown into river below town. Town is lighted by electricity, plant being at corner of Bernabé de Varona and Don Cada streets, the latter being on the main line of the Guantánamo Railroad, which has spur running into electric-light plant. The plant has a power of 90 kilowatts at present; another dynamo is en route and when installed will double present capacity (1907).

Barracks: On Cuartel street, in the extreme northwest part of the city, are the rural guard barracks. The buildings are brick, with corrugated iron roofing; formerly the old Spanish barracks. They have been overhauled and put in excellent sanitary condition. There are living quarters for about 100 men. Offices for a regiment. Officers' quarters for about one company. Stable for about 25 horses. Shower baths for officers and men, modern water-closets, kitchen, and storerooms. Running water to all parts of buildings. The whole inclosed in a quadrangle, 150 by 150 feet, of which the walls of the south and north buildings form two sides, the east and west sides being formed by joining the ends of the buildings with a stonewall about 10 feet high and 3 feet thick. Interior court for most part paved with cobblestone. Bathing place for horses in the court near stable; also water for horses in trough therein. In emergency two companies could be quartered in the buildings. They would be well suited for headquarters, offices, and guards. Sanitary condition of surroundings fair. Could be made excellent. Private buildings in the town could be seized or rented in sufficient numbers to quarter one or two regiments.

Stables: No buildings worthy of mention for stables.

Transportation corrals: Could be established in open lots near barracks; sufficient room for 20 teams and wagons. Other open lots in vicinity could accommodate ten times as many.

Hospitals: There are 2 hospitals in the city. First, the Centro Benéfico, on the corner of Aguilera and Carlos Manuel de Céspedes streets; capacity, 25 beds; water supply from city works; locality healthy; under auspices of the Sisters of Charity; maintained for the Spanish colony. Second, the Civil Hospital, a one-story brick building at corner of Máximo Gómez and Bernabé de Varona streets; capacity, 100 beds; water from city works; locality healthy; municipal hospital; mostly charity cases; always full. The club building at northeast corner of Prado and Martí streets would make a fair hospital; a two-story building, with running water and modern closets; capacity, about 25 beds; location healthful; sanitation good.

Storehouses: No buildings particularly suitable for quartermaster and commissary storehouses for large command. For small command (one company) rural guard barracks and storerooms connected therewith would be plenty. For larger command it would be necessary to construct shelter or seize or rent some of the larger warehouses near the Guantánamo Railroad depot. One long, one-story brick building immediately west of the depot could be easily converted into such storehouses.

Important offices: There are two railroad stations, viz, the Guantánamo Railroad, in southeast part of town on Pinto and Maceo streets, and the Cuba Eastern Railroad, on east side of Guaso River, about 300 yards from wagon bridge at east end of Aguilera street. Post-office and telegraph office in one building, on corner of P. A. Pérez and Bernabé de Varona streets, 4 blocks south of plaza. Telephone central on Aguilera street, north side, and opposite plaza. French cable office on west side of Calixto García street, two doors from Aguilera street, near northeast corner of plaza. City Hall on west side of Calixto García street, corner of Independencia street. Municipal jail on south side of Prado street, corner of Martí street.

Ice machine: In same building with electric-light plant. Capacity about 10 tons per day. Cold-storage rooms, capacity about 200 quarters of beef. The cold-storage rooms are chilled by means of refrigerating pipes.

Camp sites: Temporary camp site in open lot, near rural guard quarters, for one battalion; water from city works; grazing convenient; wood would have to be hauled from near plantations. If large force were to be camped for a considerable time at Guantánamo, the elevated ground southwest of the town would seem to be best locality; large enough for a brigade; good drainage; grazing and fuel convenient, but arrangements would have to be made to pipe city water to the vicinity; 1 mile of small pipe required. From the nature of the valley and the numerous good camp sites along the line of the railroads, such a position would probably never need to be occupied. Nearly every plantation affords one or more good camp sites, varying in size from a battalion to a brigade.

Defenses: No fortifications of any note left standing. The above described barrack buildings, with stone wall inclosure, are the nearest approach to a fortification. The old cemetery is surrounded by a stone wall that would be proof against small-arms fire.

The Cuba Eastern Railroad has no building suitable for military use, other than temporary storage of limited quantities of supplies at depot, which is a two-story frame building; upper story cut into offices, and lower floor consists of baggage room, freight room, ticket office, lunch room, and superintendent's office. There are two spurs about 650 yards long at railroad station; ramps for loading and unloading stock; platform level with floors of cars for loading and unloading freight.

Guantánamo Railroad yards are near the depot; 4 spurs and sidings at depot and more in the railroad yards; trackage probably 2,200 yards. Depot is a temporary frame building erected on site of permanent building which was destroyed by fire. Building contains general offices of the railroad.

Both depots have telephone; public service to all parts of city and private service to all points along railroad. The Guantánamo shops, consisting of roundhouse, turntable, foundry, cranes, etc., were destroyed by fire, together with the depot. They are to be rebuilt immediately north of town and south of Bano River. The repair shops of the Cuba Eastern Railroad are not here but at Glorieta, 13 miles south of Guantánamo. They are not very extensive.

Roads: The principal roads leading out of the town are eight in number, and are described as follows: (1) The Camino Real de Cuba, which leaves the town in a generally northwesterly direction from the northwest corner of the town. (2) The Camino de Esperanza, which leaves the town about the center of the north side in a northerly direction. (3) Camino de Santa María and San Miguel leaves town across bridge over Guaso River and follows the east bank of the river. (4) The Camino de Jamaica leaves the town past the Cuba Eastern Railroad station; continues in a northeasterly direction, and leaves the road to San Carlos and San Antonio to the right, about 1 mile from the bridge. (5) Road to San Carlos and San Antonio leaves the town over the Guaso River bridge, passes Cuba Eastern Railroad station, and leaves road to Jamaica to the left about 1 mile from bridge, from which point it continues in a generally easterly direction. (6) Camino de Baracoa leaves town over Guaso bridge, passes Cuba Eastern Railroad to the right, enters gate about 150 yards beyond railroad station, and, continuing in an easterly direction about 2 miles, turns to the south and west, leaving road to Santa Cecilia to the left at this point. (7) Camino de Los Caños leaves town at southern extremity and crosses Guantánamo Railroad and the Guaso River. (8) Camino de Limones leaves town from southwest corner; first turns south then shortly afterwards turns west. All of these roads permit travel by wheel transportation the greater portion of the year; being earth roads, they become impassable during the rainy season, which is usually October and November.

Best line of approach for attack would be from the east or north, or both combined. While this would necessitate crossing the Guaso River before actually occupying the city, the valley to the east of Guantánamo contains more roads and railroads, affording better facilities for moving troops and changing point of attack if desired, and permitting turning movements, while at the same time opposing fewer conspicuous elevations on which the defenders could command a considerable portion of the terrain. In other words, it would require many more soldiers on the defensive to protect the city from the east and north than from the west and south. The Guaso River, except in flood season, which is in the months of October and November generally, is fordable at almost any point by infantry. There is a wagon bridge across this river on the east side of the town; a railroad bridge under construction about 400 yards above the wagon bridge; a wagon bridge across it to the Confluente sugar mill, north side of town; a railroad bridge at Santa María, 2 miles north, and another at Cuatro Caminos, 3 miles north. The Bano River is also fordable by infantry at almost any point except during flood season. There is a railroad bridge over it at the north edge of town near the Confluente mill. Rivers may be expected to rise 15 to 20 feet. With a naval station on Guantánamo Bay, the question of securing the city of Guantánamo should never be a complicated one.

Arroyo Hondo.—Barrio and sitio. The barrio is made up of level country, well watered, though water is not of good quality. Cane and pasture lands prevail. The sugar mills Santa Cecilia and Los Caños are within its borders. The sitio is about 7 miles southeast of Guantánamo on the trail to Boquerón and on the Cuba Eastern Railroad. Consists of five houses in one group, and the railroad station with one or two houses in another. The station is a mere stopping place.

Baitiquirí.—Barrio and sitio. The terrain in this barrio is rough and sparsely settled. The sitio is about 40 miles southeast of Guantánamo, on the trail to Baracoa, and near the south coast. It consists of 3 or 4 houses near an old Spanish fort. This fort is at the mouth of a large cañon through which water once flowed, but it is now dry. The place was at one time a Spanish military post, and its east and west flanks are protected by stone walls running from the mountains which approach very closely to the sea. There was formerly a telegraph station.

Caimanera.—Barrio and town. Barrio situated south of the capital. Country low and level; very sparsely inhabited; almost no cultivation.

The town is about 12 miles south of Guantánamo, at the southern terminus of the Guantánamo Railroad, and on west side of Guantánamo Bay. It consists of about 150 frame houses with corrugated-iron roofs and 30 or 40 thatched huts. Population, about 1,000. The houses are scattered about on irregular lines, and many of them are built out over the water's edge on piles. There is a railroad station with a large baggage and waiting room, and near the station there is a sugar warehouse which would furnish quarters for 200 men. There is a wooden pier about 350 to 400 feet long reaching water 18 feet deep. It is in good condition, and has two railroad tracks extending onto it. There is a similar pier running into 30 feet of water at Deseo Point, 1 mile south of Caimanera; berths for two large steamers and a warehouse 100 by 100 feet, frame, corrugated-iron roof. There is no settlement at the point; only a house or two for employees of the Guantánamo Railroad. No fresh water in vicinity. Supply is received in tank cars by rail; usually enough on hand for the needs of the inhabitants for two or three days at a time. Camp sites for small detachments on sides of hills, which are on each side of the wharf at Caimanera. These hills rise about 30 feet above water. Town can not be reached by wagon transportation.

Camarones.—Barrio and sitio. Barrio is in rough, rolling country northwest of Guantánamo, and contains a number of scattered houses. Sitio is 3 miles from Guantánamo on cart road leading northwest, parallel with Río Jaibo, and consists of but a few huts.

Casimbas.—Barrio and sitio. Barrio is northeast of Guantánamo. Country is well watered; rolling near mountains; cane grown in most part. There are two places bearing the name—Casimba Arriba and Casimba Abajo.

Casimba Abajo.—Sitio. Six houses, situated about 9 miles northeast of Guantánamo. It is connected with Jamaica, 3 miles distant, by calzada. From Jamaica, Guantánamo can be reached by railroad and wagon road.

Casimba Arriba.—Sitio. Two houses, about 12 miles northeast of Guantánamo and connected therewith by road, part of which is a calzada and part wagon road. Road passes through Jamaica. From Jamaica, Guantánamo can be reached by railroad.

Casisey Abajo.—Barrio and sitio. Situated northeast of capital, in cane and pasture country; well watered and rolling. Sitio consists of 3 houses, about 5 miles east of Guantánamo on a branch of the Guantánamo Railroad. It is connected with the capital by cart road.

Casisey Arriba.—Barrio and sitio. Barrio is northeast of Guantánamo, in cane country; terrain rolling and well watered. Sitio is about 10 miles from Guantánamo and 4 miles northeast of the village of Jamaica, with which point it is connected by calzada and wagon road. Consists of 3 houses.

Corralillo.—Barrio and sitio. Barrio is southwest of capital, and includes territory south of Guantánamo River to coast; rough and wooded country, mostly devoted to stock raising; some large estates but few houses. Sitio is on trail to Filipinas, west of and near Guantánamo River, 10 miles from Guantánamo. Consists of 3 houses.

Cuatro Caminos.—Barrio and sitio. The barrio contains one sugar mill, ingenio Santa María. Sitio is 4 miles north of Guantánamo on the Guantánamo Railroad. Consists of railroad station and 4 houses. Cart road to Guantánamo. Surrounding country is cane and pasture land.

Guaso.—Barrio and village. Barrio is in country which varies from rolling to rough and mountainous; southern portion grows cane and northern part runs into foothills of the sierra; land not growing cane is in pasture land; water plentiful. The Esperanza sugar mill is in the barrio.

The village is 7 miles north of Guantánamo and 1½ miles north of Esperanza mill. Consists of about 40 or 50 houses, somewhat scattered, and 2 general stores; about 400 people. Water obtained from streams and wells. No building of any importance. Trails north into the hills and cart roads to the south connecting with wagon road to Esperanza and Guantánamo.

Indios.—Barrio. Situated south of capital, between Jaibo and Guaso rivers, in fairly level country; mostly pasture land. No point bearing its name. There are some scattered houses and a sitio, Mata Abajo, which consists of 7 or 8 houses. There is also a station on the Guantánamo Railroad called Mata Abajo.

Isleta.—Barrio. Southeast of and adjoining the capital. Cane and pasture country. No point bearing name.

Jaibo Abajo.—Barrio and sitio. The barrio is southwest of Guantánamo on west side of Jaibo River and, except the scattered settlement of the same name, contains no villages. Cane and pasture country; rolling and well watered. The sitio is about 1 mile west of Guantánamo, on the Jaibo River; 3 houses.

Jaibo Arriba.—Barrio and sitio. The barrio is west of Guantánamo and, except the point bearing its name, contains no villages; rolling pasture country. The sitio is about 4 miles from Guantánamo on cart road leading west. At least 7 houses.

Jamaica.—Barrio and town. Barrio is made up entirely of rolling cane lands; well watered. Wagon roads leading through it are good in dry season. Besides the town of Jamaica it contains the sugar mills San Miguel, San Carlos, Santa María, and Isabel and the colonia San Vicente.

The town is 5½ miles northeast of Guantánamo, on the east bank of the Arroyo Hondo and on the northeast branch of the Guantánamo Railroad. The principal street is about 1 mile long, running generally north and south. All the business houses are on this street. Another street, east of and parallel to the principal street, is about the same length and is lined for the most part with thatched-roof houses. The town contains about 300 houses, most of which are frame with corrugated iron roofs; a few are two stories high and perhaps 20 have tile roofs. Beginning at the bridge across the Arroyo Hondo, at the south end of the town, the main street and the road, for a distance of 4 miles north of town, are macadamized. The town appears to be kept clean and has a prosperous appearance. Population, 1,400.

Water supply is obtained from Arroyo Hondo; carried by hand or in carts; abundant supply; should be boiled before drinking; no sewer system; lighted by oil.

No barracks or buildings particularly suited for such. A small one-story brick schoolhouse on south side of railroad, about 100 yards east of the main street, and formerly used as General Torral's headquarters, would accommodate about

20 men. Several of the business houses on the main street, near the south end, could accommodate 40 or 50 men by displacing occupants.

No stables. A shed with corrugated-iron roof, wooden frame, no sides, near and north of railroad bridge, would accommodate about 30 horses.

No transportation corrals, but east of and immediately adjoining town is a large open pasture of 200 acres; good drainage; abundant grazing and fuel; would answer for transportation corral or both corral and camp site. Water on both sides of pasture.

No hospital. No buildings particularly suited for such use. Would be necessary to seize or rent dwellings or use tents.

No buildings suitable for quartermaster or commissary storehouses except buildings now used as stores which might be seized or rented in sufficient number to accommodate a brigade.

Railroad station is on west side of Arroyo Hondo, about one-eighth of a mile from the town; one-story frame building in good condition; baggage and storeroom about 40 by 25 feet; siding and platform for loading stock and baggage. No telegraph office. No telephone system for the town. Telephone office for Guantánamo Railroad at depot.

Camp site east of and immediately adjoining town; good drainage; water, wood, and grass abundant and convenient. Ground sufficient for a brigade. Location healthful.

Guantánamo Railroad runs through south end of town with siding at depot on west side of river; also siding on east side of river in south end of town. Facilities at depot for loading and unloading two cars at a time.

There are roads and trails out of the town as follows: (1) The road to Guantánamo is passable most of the year for wagons. Leaves south end of town across steel bridge over the Arroyo Hondo. (2) Road to all points north along the Arroyo Hondo leaves town at the north end, following the east bank of the river. (3) Road to central Isabel leaves town at north end turning to northeast on first road leading to right. (4) Road to La Luisa leaves town to the east at a point about 200 yards north of railroad. (5) Road to Romelie and San Antonio leaves in a southeasterly direction from the south end of town near railroad crossing. (6) Trail to San Miguel leaves to west from a point about midway between the north and south ends of the town.

The best line of approach in attacking would be along the Guantánamo Railroad or the main wagon road from Guantánamo, or both. The town would be hard to defend against artillery unless the defenders were in force and also had artillery at advanced positions. Hills on every side, within field artillery range, command the town. The most conspicuous elevation on the road from Guantánamo is a little south of west of San Vicente, about one-fourth of a mile distant from the latter. This hill commands the entire country within range of artillery. Both the Arroyo Hondo and the Río Casisey are fordable by infantry at any point, except in flood season, which occurs in October and November, and by cavalry at numerous fords. Field artillery could only cross by means of bridges or prepared fords.

San Vicente.—Sitio. Situated 5 miles by wagon road northeast of Guantánamo and 1 mile south of Jamaica, on main line of Guantánamo Railroad. The estate on which it is situated is a colonia owned by the Guantánamo Sugar Company. It consists of a dismantled sugar mill, two or three dwellings, barracks for laborers, blacksmith shop, repair shop, and store; all one-story frame buildings, with corrugated-iron roofs, and in good condition.

Water supply obtained from two small streams—the Arroyo Hondo and Arroyo Casisey; quantity abundant, but quality very poor. Pumped by windmill into a service tank.

Buildings would accommodate about 200 men. No shelter for animals.

Good camp site on hills near buildings and railroad. Water and grass abundant; fuel obtainable by railroad from San Carlos. Accommodations for a brigade. Locality healthful.

Lajas.—Barrio. Situated northwest of Guantánamo. Terrain very rolling, well watered, and mostly in growing cane. Contains village of San Pré, sugar mill Soledad, and the sitios of Santa Fé, San José, and Santa María.

San Pré.—Village. Situated 7½ miles northwest of Guantánamo, on the road to Santiago. It is a station on the Cuba

Eastern Railroad, and is the western terminus of the Guantánamo Railroad. In the center of a rich valley, which is being cleared of timber and converted into cane land. Population about 300. About 30 one-story frame houses, mostly new and in good condition, and about same number of huts. Water supply obtained from the Río Bano; quality good and quantity abundant. Could quarter one platoon of troops. Post-office; railroad telephone from both Cuba Eastern and Guantánamo Railroad stations to Guantánamo. Most easily reached by either Guantánamo or Cuba Eastern Railroad from Guantánamo and by an unimproved wagon road leaving northwest corner of rural guard barracks at Guantánamo. Surrounding country is rolling, with mountains near on north and hill to south. Cane and open pasture land in valley. Locality healthful. Numerous good camp sites in vicinity. Village in a prosperous condition and growing rapidly.

Santa Fé.—Sitio. Situated 8 miles by road and trail north of Guantánamo, on the side of a hill. Consists of a few houses. Water from branch of Río Bano. Camp site for a brigade. One-half mile to southeast, on trail to Guantánamo, is the location of an old Spanish redoubt.

San José.—Sitio. Situated 1 mile north of San Pré, on cart road connecting therewith, and at end of a branch of the Guantánamo Railroad. Consists of a few houses on sugar-cane plantation.

Santa María.—Sitio. Situated 7½ miles by road and trail northwest of Guantánamo, on a branch of the Guantánamo Railroad running from ingenio Soledad. It is 2½ miles northeast of San Pré, by road. Several houses; property of the colonia. Water from Río Bano.

Macuriges.—Barrio and village. Barrio is situated in a heavily wooded district; rolling and well watered. Some new ground in cane. Besides the settlement bearing the name it contains Belona and Corralillo.

The village is 24 miles northwest of Guantánamo, on the road to Santiago. There is also a railroad station by the same name south of the village about 1 mile, on the Cuba Eastern Railroad. The settlement consists of a general store and a number of houses divided into two groups about one-half mile apart, the main group being on the banks of the Macuriges River. The water supply is obtained from the river.

Belona.—Village. Situated on Cuba Eastern Railroad, on east bank of Corralillo River, about 21 miles from Guantánamo. Population, about 40. About 8 new, one-story, frame houses; sawmill; blacksmith shop and cart shed. Additional buildings are being erected. Headquarters of the Cuba Hardwood Company, one of the allied companies of the Cuba Eastern Railroad Company. Water supply from mountain stream near by; quality good; quantity sufficient for all needs. Could shelter one company under sawmill shed and cart shed. Telephone to Guantánamo and all other points along the Cuba Eastern Railroad. Cart road north connecting with Santiago-Guantánamo wagon road near Macuriges, and a trail south which leads to Guantánamo. Surrounding country rolling and wooded. Good camp site for a regiment. Locality not believed to be very healthful.

Corralillo.—Sitio. About 19 miles west of Guantánamo on Santiago-Guantánamo wagon road; 8 or 10 houses; water from creeks.

Ocujal.—Barrio and sitio. Barrio is east of Guantánamo Bay, in a district that is extremely level in some parts and hilly and rough in others; very little fresh water. Besides the sitio bearing its name the barrio contains Boquerón and Glorieta. The sitio is 18 miles southeast of Guantánamo in a direct line and 10 miles by trail from Boquerón. Consists of 2 or 3 huts; water from a spring.

Boquerón.—Village. On east side of Guantánamo Bay opposite Caimanera, and 11½ miles in direct line southeast of Guantánamo city. Population about 50. Terminus of Cuba Eastern Railroad. Water brought in tank cars and stored in small tank, which holds sufficient for needs of natives for two or three days. There is a pier about 400 feet long reaching 20 feet of water. Three tracks run to end of pier and three large steamers can berth. Railroad buildings consist of railroad station, with warehouse 150 by 30 feet, and a few poorer houses for the employees of the railroad. About 100 men could be quartered about the railroad station if space is not needed for stores. No camp sites in vicinity; ground low, almost sea level.

Glorieta.—Sitio. Situated 13 miles by trail southeast of Guantánamo and 6 miles by railroad from Boquerón. Consists of shops of the Cuba Eastern Railroad and a few houses for employees. Water from tank which is filled from tank cars.

Palmar.—Barrio and village. Barrio is in a mountainous district, the products of which consist principally of coffee and cacao. There are numerous scattered houses. The village is 10 miles northeast of the capital; 14½ miles by best road via Jamaica and Casimba Arriba. Consists of 4 stores and 15 or 20 houses.

Palma de San Juan.—Barrio and village. The barrio is west of the capital. Terrain rolling, well watered, and devoted to pasture and cane raising. Besides point bearing its name, it contains Maguecillo and some sugar colonias. The village is 5 miles west of Guantánamo on wagon road connecting it therewith. Small settlement with one general store.

Maguecillo.—Village. A small settlement with one general store, situated 4½ miles west of Guantánamo at junction of two cart roads and a trail, all of which lead westward out of Guantánamo.

Río Seco (San Antonio).—Barrio and village. Barrio is situated in cane-growing country, and contains the sugar mills San Antonio and Romelie and colonias San Rafael and La Luisa. The village is 10½ miles by road from Guantánamo, slightly north of east, on the Río Seco, near the San Antonio mill, and at the foot of a high ridge which runs north and south, forming the eastern boundary of the Guantánamo valley. Consists of about 100 houses and a few stores. Population about 800; mostly laborers in surrounding cane fields. Water supply obtained from the river; quality not very good.

Sigual.—Barrio and sitios. Barrio is northeast of capital in mountainous country; some cane fields. Contains two settlements bearing its name, i. e., Sigual Abajo, situated 11 miles by road northeast of Guantánamo, and Sigual Arriba, 13 miles distant on same road. They are small settlements, with no buildings which could be put to any military use. The cart road on which they are situated connects at both ingenio Isabel and central Romelie with wagon roads to Guantánamo.

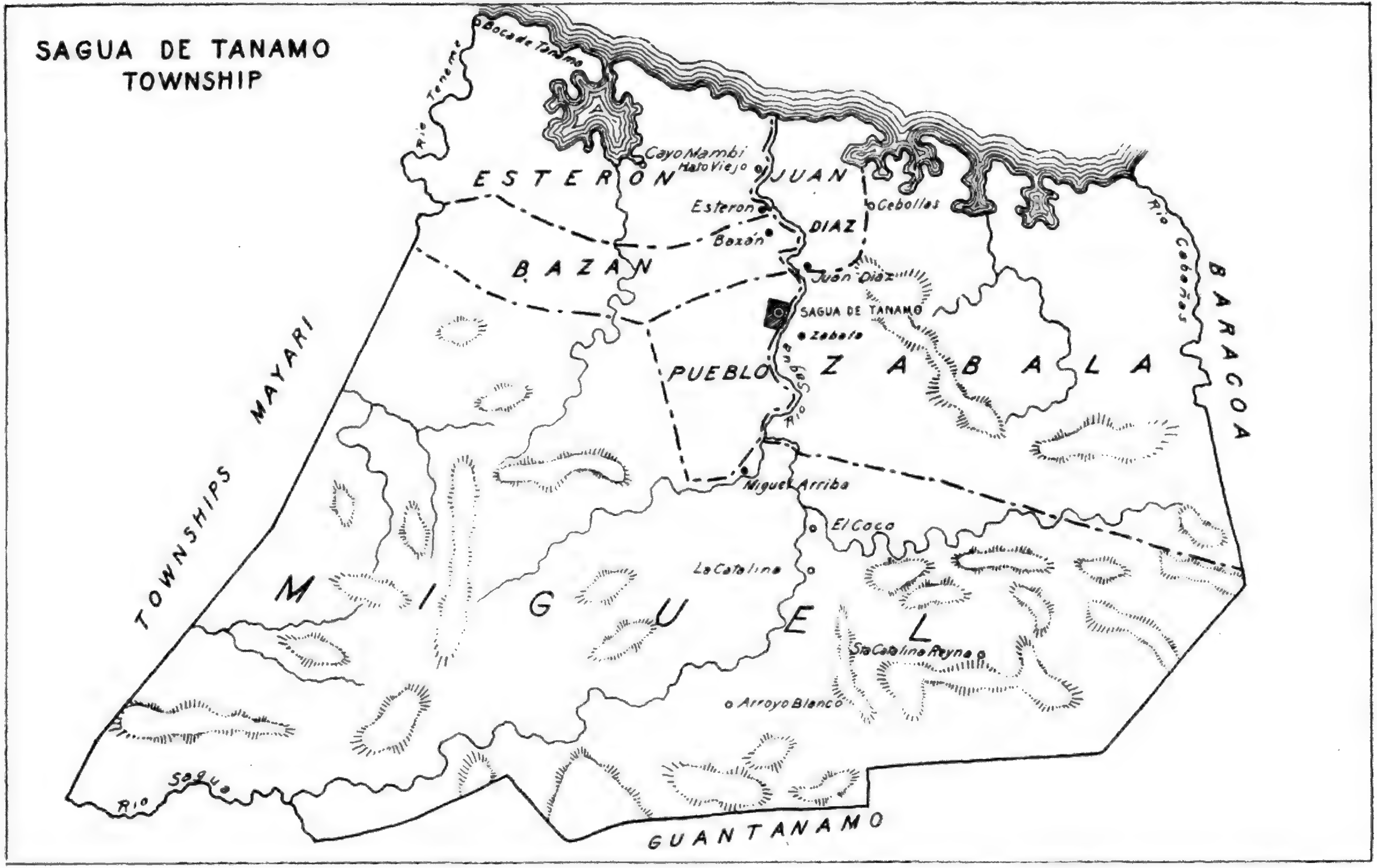
Tiguabos.—Barrio and village. Barrio is in a rough and rolling district which has a general elevation of 300 or 400 feet above sea level; mostly wooded; some ground in cane; well watered; traversed by Cuba Eastern Railroad. Besides village bearing its name it contains Cunuera and the estate of Marco Sánchez.

The village is about 13 miles northwest of Guantánamo on the Guantánamo-Santiago road and on the west bank of the Jaibo River. Population about 250. About 25 one-story frame houses, including schoolhouse and 3 general stores. Water supply from Jaibo River; quality good, quantity abundant. Could quarter one company. Post-office and Cuba Eastern telephone line to Guantánamo. Most easily reached by cart road from Guantánamo via San Pré, or by Cuba Eastern Railroad to Jaibo station, thence by trail to Tiguabos. Surrounding country rough and timbered. Locality healthful. Good camp site between village and river for one battalion. Camp site for a regiment in vicinity.

Cunuera.—Sitio. A railroad station on Cuba Eastern Railroad 1 mile south of a point on Guantánamo-Santiago wagon road, 14½ miles from Guantánamo; on branch of Río Jaibo. One building. Water from creek. Telephone to Guantánamo and other points on Cuba Eastern Railroad.

Vínculo.—Barrio. Situated southwest of capital in heavily wooded country; partly mountainous. No villages; no point bearing name of barrio; few inhabitants. Products are hard wood and stock.

Yateras.—Barrio and sitio. Barrio is northeast of the capital in rough and mountainous country. Traversed by Yateras River; good water. Principal products are coffee and cacao. The sitio is a small settlement about 18 miles by trail northeast of Guantánamo and near the Yateras River.



SAGUA DE TANAMO
TOWNSHIP

TOWNSHIP OF SAGUA DE TÁNAMO (CAPITAL, SAGUA DE TÁNAMO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Sagua de Tánamo	Pueblo (Sagua de Tánamo)	Rural and urban.		1,222
Bazán	Bazán	Rural	4.6	1,288
Esterón	Esterón	do	5.6	1,018
Cayo Mambí.				
Hato Viejo.				
Boca de Tánamo.				
Juan Díaz	Juan Díaz	do	3	1,042
Arroyo Blanco	Miguel	do	10	2,411
Castro.				
La Catalina.				
El Coco.				
Miguel Arriba.				
Santa Catalina Reyna.				
Zábala	Zábala	do	.7	1,417
Cebollas.				
El Sitio.				

Sagua de Tánamo.—Town. The town is on the west bank of the Sagua River, about 12 miles from its mouth and 8 miles from Esterón, which is on the eastern extremity of Tánamo Bay. This bay reaches to within 200 yards of the Sagua River. The town is small and is regularly laid out in squares, but has no sidewalks or metaled streets. There are about 100 one-story houses, a few being of stone. Most of the stores and principal dwellings are frame, with tile roofs. The western part of the town contains mostly thatched roof huts. It has 10 general stores, a drug store, and a blacksmith shop. The whole town is on an elevation which rises abruptly on the south and east sides 60 feet above the general level of the valley and slopes to the north and northwest. The surrounding country is hilly; becomes level a short distance north, and is mountainous immediately to the southeast and west. Mail is brought overland from Guantánamo and by boat from Esterón.

The principal business men handle general merchandise. The small farmers grow tobacco, while two large companies (the Simón Fruit Company and the Tánamo Agrícola) own large tracts of land and are devoted to the exportation of fruits, coffee, and cacao. This is one of the very few places in Cuba in which no Americans reside or carry on business.

Population of town, 1,222.

The water for the city is obtained from the Sagua River and is distributed by means of carts to those who are willing to pay for the service. The water should be boiled before drinking, as probably one-fourth of the population of the valley lives along the banks of this stream and its tributaries; quantity unlimited.

There is no sewer system and apparently no street cleaning. The city is lighted by oil.

There is a rural guard barracks, which is a small one-story brick building; corrugated iron roof; condition good; capacity about 20 men; on east side of Plaza de Armas. A schoolhouse, 100 by 20 feet, one story, frame, zinc roof; good condition; one block southwest of Catholic Church. Neither building has water system. Locations healthful.

There are no stables. Transportation corral could be established at foot of hill, between town and river on south side of town; open ground; animals could be watered at ford near by; capacity sufficient for any possible needs.

No hospital; most suitable building would be schoolhouse mentioned above.

No buildings suitable for quartermaster or commissary storehouses except small private residences which might be seized or rented.

No railroad. Post-office and telegraph office in same building, on east side of Plaza de Armas. Private telephone line from this office to Cayo Mambí and Esterón. Line belongs to the Simón Fruit Company.

Best camp site is Plaza de Armas; capacity, one battalion; good drainage; water from river near by; fuel and grass convenient.

No fortifications now in existence, but the town was surrounded by blockhouses connected by earthworks during Spanish régime.

Trail to Mayarí leaves west end of town in a northwesterly direction to Bazán, where it turns westward to Mayarí; the same trail, if followed to the north from Bazán, leads to Esterón, 8 miles; 1 mile north of Bazán a branch trail to the east leads to Juan Díaz, and 2 miles north of Bazán, at a point called Guaygenal, a branch trail to the west leads to

Cayo Mambí. A trail leaving the town to the south and crossing the river about 300 yards from the town, leads to Guantánamo and intermediate points along the Sagua and Catalina rivers; turning to the right off of this trail, at first opportunity before crossing river, is a trail which leads to points along the valley of the Miguel River; turning to the east instead of the south, on crossing the river, is the trail to Aguacate, Puerto Rico, and other eastern points.

The town is defended naturally on the south by mountain ranges. It is commanded by hills to the west and southwest, and also on the east side of the river.

General information: The valley of Sagua de Tánamo is isolated from the remainder of the island by almost impassable trails. It is fertile, but small. In event of insurrection it would doubtless be a hiding place for insurgents unless occupied by American troops. The headwaters of the Sagua River lead to grounds which were formerly in the hands of the insurgent forces and where they were never molested. There is not a road in the valley. The most important line of communication from the town, the trail to Esterón, is impracticable at the best season of the year for any wheel transportation excepting ox carts, and the loads carried by these are extremely small. The trail to Guantánamo is almost impassable for man or beast, and for a great portion of the year is totally impassable. The trail to Baracoa and intermediate points is, according to reports, no better and possibly worse. The trail to Mayarí is very little better. The supply of troops at Sagua de Tánamo by pack train from any other point than somewhere on Tánamo Bay would be difficult. If it ever should become necessary to occupy this town the immediate construction of a wagon road from Sagua de Tánamo is recommended, or else the extension of the Simón Fruit Company's railroad from Cayo Mambí to Sagua de Tánamo.

Bazán.—Barrio and sitio. The sitio is south of Esterón on the road to Sagua, about 4 miles north of Sagua. It has 10 houses. Tobacco raising district. The sitio also has a blacksmith shop and a general store, and there are 4 general stores between Bazán and Sagua de Tánamo.

Esterón.—Barrio and village. Besides the village of Esterón, the barrio contains the villages of Cayo Mambí, Hato Viejo, and Boca de Tánamo.

The village is at the extreme eastern point of Tánamo Bay, about 5 miles northwest of Sagua de Tánamo. There is a government pier and a storehouse at this point which are rented by the Simón Fruit Company. Both the pier and the storehouse are constructed of wood and are in a bad state of repair. The place can not be reached by seagoing vessels, although there is 9 feet of water at the pier. Vessels anchor just inside of the mouth of Tánamo Bay, the cargo being taken to Esterón by lighters. There are 16 of these at Cayo Mambí. The village has a general store and a population of about 40.

A bar at the entrance of the channel leading to Esterón and Cayo Mambí, with only 5 feet of water, prevents entrance of steamers. A tramway leads from the pier to the bank of the Sagua River, 150 yards distant, and a branch 1¼ miles long extends into the banana fields north of Esterón. The only rolling stock is 6 small flat cars, each about 10 feet long.

Freight for Sagua de Tánamo is unloaded at Esterón and transported by means of bull carts when the roads are good, and by flat-bottom boats up the Sagua River at other times. This river is not navigable; it is simply a series of pools, and the boats have to be hauled from one to the other by oxen. The place is infested with mosquitoes. There is a telephone to Sagua de Tánamo via Cayo Mambí.

Cayo Mambí.—Village. On Tánamo Bay, 6 miles northwest of Sagua de Tánamo. There is a wharf with 8 feet of water and a frame storehouse about 50 by 25 feet. Both are in bad state of repair. There is a narrow-gauge road running from the end of the pier to various parts of the banana fields and to the Sagua River. Considering all the spurs, there is not sufficient material on hand to extend track to Sagua de Tánamo. Track is in bad state of repair, and the material poor. There is in the village a branch office of the Simón Fruit Company, the main office being at Baracoa. Around Cayo Mambí, scattered irregularly over the country, this company has about 2,000 acres of bananas under cultivation and contemplates opening up 2,000 more. A fruit steamer plies regularly between this village and Philadelphia, the cargo being transferred at the anchorage south of Cayo Juanillo from a barge sent out from Cayo Mambí. Population, about 100.

Drinking water is obtained from wells and rain water. A pipe line 1½ miles long brings water from a small stream when it contains water. The railroad reaching to Sagua River could carry water to any point along the line.

There is a telephone line, about 20 miles in all, leading to Esterón, Guaygenal, Río Grande, and to telegraph office at Sagua de Tánamo. The office is at the house of the Simón Fruit Company on top of the hill, about 1 mile from the wharf.

There are from 15 to 20 frame buildings used for offices and dwellings of the above-named company. They would accommodate about two companies of infantry.

There is no good camp site near at hand. High ground exists, but is too steep and rocky to make a good site. Level ground also exists, but is too low or wanting in other respects to be suitable. The locality is not healthful.

Hato Viejo.—Village. The village is about 5 miles north of Sagua de Tánamo. It consists of 15 to 20 houses along a single street.

Boca de Tánamo.—Village. A settlement of fishermen situated within the entrance to Tánamo Bay on the east side. The water is very deep up to the shore and large vessels can anchor by attaching lines to the shore. There is no wharf. There are about 30 houses. This was a Spanish outpost and there was a blockhouse and earthworks to prevent landing. It was connected by telephone with Sagua de Tánamo, but the line is no longer in working condition. There is a trail to Esterón.

Juan Díaz.—Barrio and sitio. The sitio is situated 3 miles northeast of Sagua de Tánamo and has 50 inhabitants. Tobacco growing is the only industry. There is a general store and schoolhouse at the sitio. The inhabitants live in huts scattered along the river road for 1 mile.

Miguel.—Barrio. Contains the settlements of Arroyo Blanco, Castro, La Catalina, El Coco, Miguel Arriba, and Santa Catalina Reyna. All are unimportant places. The inhabitants raise tobacco.

Arroyo Blanco.—Sitio. Situated about 18 miles by road south of Sagua de Tánamo and consists of a few scattered houses and fincas.

Castro.—Sitio. Situated 8 miles east-southeast of Sagua de Tánamo and consists of a few scattered houses and fincas.

La Catalina.—Sitio. Situated 9 miles southeast of Sagua de Tánamo and consists of a few scattered houses and fincas.

El Coco.—Sitio. Situated about 4 miles southeast of Sagua de Tánamo and consists of a few scattered houses and fincas.

Miguel Arriba.—Sitio. Situated about 4 miles southwest of Sagua de Tánamo and consists of a few scattered houses and fincas.

Santa Catalina Reyna.—Sitio. Situated 22 miles south-southwest of Sagua de Tánamo and consists of a few scattered houses and fincas.

Zábala.—Barrio and sitio. The barrio contains the settlements of Cebollas and El Sitio besides the sitio bearing its name. The sitio is a small settlement of not more than 10 houses and is situated ¾ of a mile east of Sagua de Tánamo.

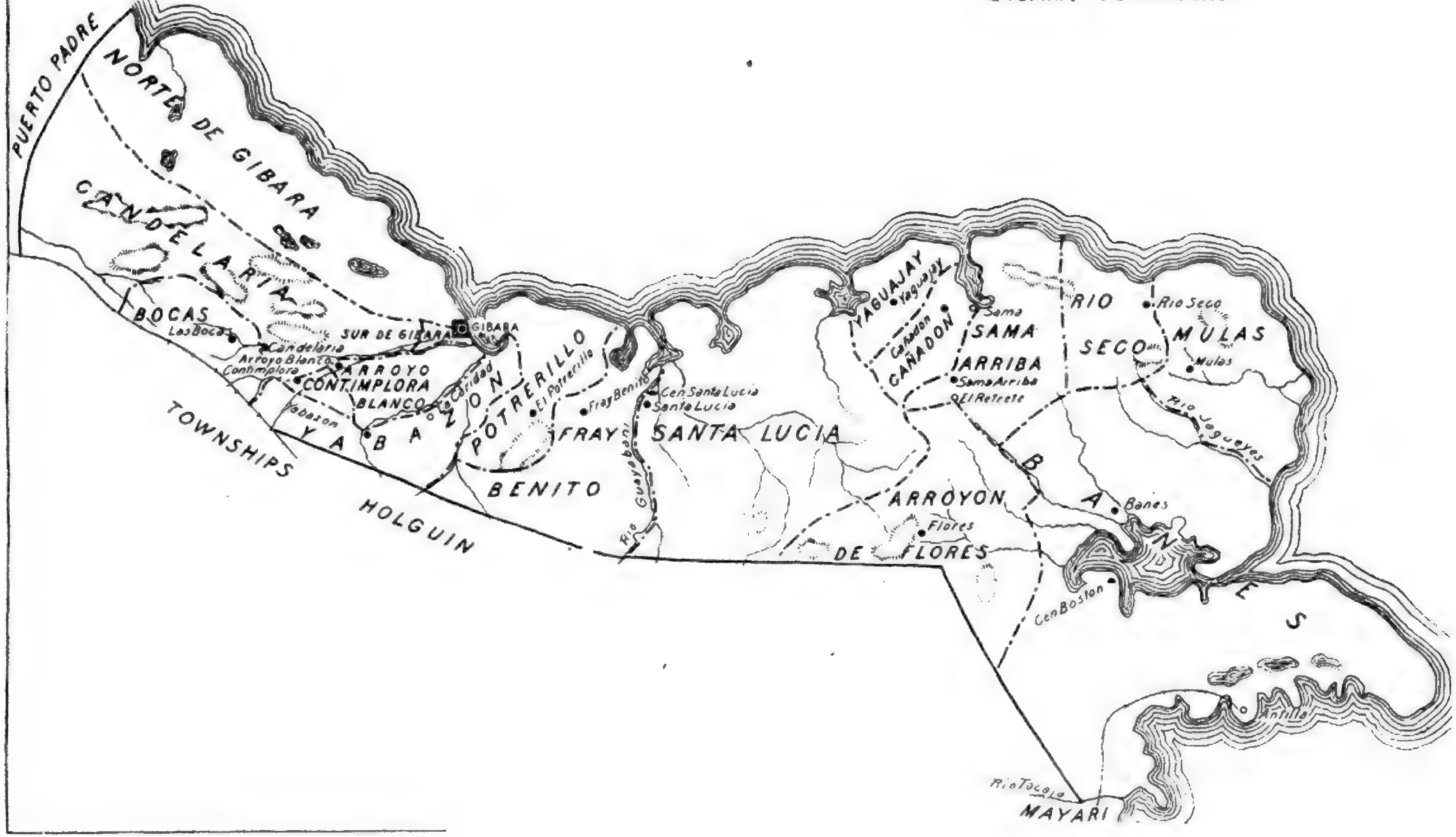
Cebollas.—Sitio. Situated 6 miles northeast of Sagua de Tánamo, on the Sagua de Tánamo-Nibujón trail, and consists of 7 houses.

El Sitio.—Sitio. Situated 4 miles east of Sagua de Tánamo and consists of a few scattered houses and fincas.

JUDICIAL DISTRICT OF HOLGUÍN.

Township:	Population.
Gibara	39, 343
Holguín	50, 224
Mayarí	17, 628
Puerto Padre	34, 061

GIBARA TOWNSHIP



TOWNSHIP OF GIBARA (CAPITAL, GIBARA).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Gibara	Norte de Gibara	Rural and urban.		3,868
	Sur de Gibara	do		2,870
Arroyo Blanco	Arroyo Blanco	Rural	6	1,028
Cupeycillo.				
Embarcadero.				
Vigía.				
Flores	Arroyón de Flores	do	29	2,984
Berros.				
Banes	Banes	do	37	7,523
Antilla.				
Durrati.				
Embarcadero.				
Tasajeros.				
La Güira.				
Los Angeles.				
Los Negritos.				
Veguita.				
Bocas	Bocas	do	12.5	2,215
Blanquizal.				
Hatico.				
Las Nasas.				
Limones.				
Recreo.				
Cañadón	Cañadón	do	33.7	1,320
Boca de Samá.				
Candelaria Afuera	Candelaria	do	8.5	621
Munilla.				
Contimplora	Contimplora	do	7	396
Fray Benito	Fray Benito	do	7.5	2,739
Junicúm.				
Rabón.				
Mulas	Mulas	do	42	1,627
Potrerillo	Potrerillo	do	5	2,194
Jagüeyes.				
Palmarito.				
Santa Rosalia.				
Río Seco	Río Seco	do	39	681
Samá Arriba	Samá Arriba	do	32	2,479
La Juba.				
Retrete.				
Vega.				
Santa Lucía	Santa Lucía	do	12.5	4,589
Bariay.				
Vita.				
Yabazón	Yabazón	do	10.5	1,572
La Caridad.				
Demajagua.				
Yaguajay	Yaguajay	do	27	637

Gibara.—Barrio and town. The town of Gibara is situated on the north coast of Oriente Province, 21.3 miles northeast of Holguín, on a kind of triangular point or cape formed by the sea and the Bay of Gibara. A line from the extreme eastern point (Point San Fernándo) to the middle of the base of the triangle would lie nearly due east and west. Back of the town (that is, to the west) lies a ridge probably 250 feet high commanding the town and extending from the bay on the south to within 600 yards of the sea on the north. This ridge is a curve (concave toward the town) and the chord of the curve would lie almost due north and south. From San Fernándo Point, the extreme eastern point, to the top of this ridge is probably three-quarters of a mile. The town lies entirely to the east of the ridge. During the Spanish régime a stone wall 8 feet high and 15 inches thick extended along the top of this ridge from the bay to the sea. This wall is practically all destroyed. Crowning this ridge there were also 7 stone blockhouses. These have all disappeared except 2—one at the north end of the ridge and one at the south end at the Gibara and Holguín Railroad depot. The one to the north is a round stone house about 20 feet in diameter, walls 2 feet thick, and is pierced for two tiers of fire. The one at the south end is octagonal in shape, about 20 feet on a side, walls 2 feet thick, and is pierced for 3 tiers of fire. Both are in fair condition. The old Spanish barracks was situated at about the center of this ridge. This barracks is now in ruins. The only seacoast fortification is a small fort (Fort San Fernándo) situated on San Fernándo Point. Gibara is divided into two wards or barrios, viz, Norte and Sur.

It is principally a commercial town. Derives its support from its port and the surrounding country, which includes the sugar estates of Santa Lucía and Chaparra.

There are several large importing and exporting houses. Principal exports are sugar and fruit. It has a sawmill, ice plant, and electric-light plant. Fishing is one of the principal industries. There is a board of education, board of charity and a board of health. Population, 6,170.

The city has no waterworks. All drinking water is obtained from cisterns. All well water is salty.

There is a sewer system, but pits and cesspools are principally used. Lighted by electricity; plant is at the north edge of the town near the beach.

Barracks and buildings suitable for same: The houses in Gibara are nearly all of stone. There are no public buildings except the custom-house and an old Spanish barracks which is now used for a public school. The custom-house is a small one-story wooden building, 33 by 63 feet. It is situated on the bay; that is, on the south side of the town. The

Spanish barracks referred to is of stone, but it is also small. It has three squad rooms—two 20 by 35 feet and one 20 by 95 feet. Inside the courtyard there is a well and a cistern. The largest building in Gibara for troops is the old Spanish Military Hospital, which now belongs to the municipality. This building is rectangular in shape, with a rectangular court inside. The outside dimensions are 185 by 370 feet, inside dimensions 85 by 225 feet. It is of stone, except the east side, which is of wood. It is not in good condition, but could be easily repaired and would then accommodate a battalion. It has a well and cistern in the court. Part of the building is used as a city infirmary and part as a police station. A stone building called the "Lazareto," belonging to the municipality, and situated at the northern end of the above-mentioned ridge, is a quarantine hospital, but it is not in very good condition and does not appear to have been fixed up for the above purpose. The Ayuntamiento is in a private building. The town has one Catholic Church, a stone building in good condition, situated on north side of plaza Calixto García; size, 70 by 115 feet. One Quaker Church, stone, 30 by 35 feet. A public theater, a stone building 50 by 75 feet. Ten public schools; all in private buildings, except one in old Spanish barracks. In addition to those named the Cuban Club and the building occupied by the Ayuntamiento, situated next to each other on the west side of the Calixto García plaza, might be serviceable. Club has modern water-closet. These buildings are in good repair and could accommodate about 200 men. The hotel and Spanish Club, one block west of the plaza, could also accommodate 200 men. These buildings are also in good repair. Both have modern water-closets.

There are no stables nor is there suitable ground anywhere near the town for corrals.

In addition to above-mentioned hospital the theater and church could also be used for the sick. There is also an infirmary, an asylum for old men.

There are a number of private warehouses that could be used for quartermaster and commissary storehouses. They are situated on or near the water front at the south edge of the town, and a tramway runs to all of them. No unloading platforms.

Post-office and telegraph station are in adjacent buildings on south side of plaza Calixto García. No telephone central.

The ice plant is at the north edge of the town near the beach.

The Gibara and Holguín Railroad, 36-inch gauge, has terminal here.

There are only two roads leading out of town. One leads south to Holguín and one northwest, near the beach. A trail leads around the bay to Santa Rosalia. A number of roads branch off from the Holguín road after it gets out some distance from the town.

If the town were well defended it could not be taken from the land side. The best way to take it would be from the sea. There are only two lines of approach into the town by land, i. e., the two roads mentioned above. The Holguín road is practically a defile lying between the Cacuyuquín River and a ridge. It runs along the foot of and parallel to this ridge which commands it. An attack along it would be impossible. If an attack had to be made by land, the best line of approach would be along the beach from the northwest. This might succeed.

Arroyo Blanco.—Barrio and village. Village is situated on Gibara-Holguín road, 6 miles from Gibara, and consists of 15 or 20 native houses.

Cupeycillo, Embarcadero, and Vigía are small villages in Arroyo Blanco barrio, each consisting of one or two stores and a few houses.

Arroyón de Flores.—Barrio and sitio. The sitio Flores is situated 29 miles southeast of Gibara and consists of 8 native houses.

Berros is a sitio also situated in Arroyón de Flores barrio and consists of only a few houses.

Banes.—Barrio and town. The barrio contains, besides the town of Banes, the small villages of Antilla, Durruti, Embarcadero, Tasajeras, La Güira, Los Angeles, Los Negritos, and Veguita and the central Boston.

The town is situated 37 miles by road east of Gibara and 3½ miles west of Banes Bay. It is small and inhabited mostly by laborers of the United Fruit Company's estate. There are, however, a number of stores and the usual small dealers, who make their living mostly from the employees of the afore-mentioned estate. The principal buildings belong to the United Fruit Company, the offices of their headquarters and their railroad shops and offices being situated here.

Population, 3,788.

Water supply obtained from cisterns and a small stream. There is, however, a small supply of good water for the employees of the United Fruit Company and their engines, taken from a small stream that flows through the town. The water is taken from above the town and is piped into tanks at Banes and at points along the railroad line. If the supply at Banes ran short, water could be hauled in tank cars from other points of the property.

No sewer system. Lighted by oil.

No buildings especially suitable for barracks. Some of the company's buildings could be converted into barracks and storehouses; would furnish shelter for 300 or 400 men. So far as the town proper is concerned, there would be accommodations for no more than a small detachment.

No stables. Barricones of the company scattered about over the property could be used for shelter. They are sufficiently large to shelter 25 to 50 animals. Material usually at hand for hastily constructing enough shelter for 200 animals. There is a sawmill.

No transportation corrals.

A hospital belonging to the United Fruit Company is situated north of town. Frame building; 50 beds; running water; operating room; one isolation ward for infectious diseases.

United Fruit Company's storehouses contain supplies that would be useful to commissary and quartermaster, and the same buildings could be used for army purposes if necessary. Others could be built to better advantage probably. The company's railroad leads to all of their principal buildings.

Railroad station on east side of town. No telegraph. Telephone communication over company's lines from all of their offices. Connection with all neighboring plantations and towns.

No ice machine in town but there is one at the mill on the bay (central Boston).

The best camp site is near the town and just north of it; room for one regiment; good drainage; clean open ground;

good water supply close at hand; fuel not abundant in immediate vicinity but could be secured on the property of central Boston and delivered by railroad; plenty of grass. A battalion could be encamped at the embarcadero and another at central Boston; all requisites, except grazing, at both places. Camp site at station called Naranjo, on railroad; one battalion; all requisites for a good camp site.

No defences.

The only railroad in the vicinity is the one belonging to central Boston.

No roads passable by wagons in wet season except the one leading to Samá Bay.

To attack, troops should land at the central Boston or the embarcadero, or both, and approach town from the east. While this side would be the easiest to defend, it would be the only practicable way of reaching the place except to come in from Samá Bay. Detours could be made from the points named so as to approach the town from any direction. The highest ground in the vicinity is west of the town and commands it.

Antilla.—Village. On the west side of Nipe Bay; northern terminus of the Cuba Company Railroad. Is a port of entry and has a custom-house. Population, about 100. Contains about 12 one-story frame houses, the property of the railroad company, and about 15 native shacks; 3 large corrugated iron warehouses, one 200 by 50 feet, two about 100 by 30 feet; sawmill; railroad pier reaching to 18 feet of water. Four sidetracks. Water supply obtained from Bio River, 2 miles south of Alto Cedro; carried to Antilla in tank cars; quality good; quantity limited. Could quarter three companies. Railroad telegraph to all points along line. Private telephone to Preston, Banes, and other points around Nipe Bay. No camp sites in vicinity for more than a few squads. Low ground; surrounding country mostly lagoons and bayous. Can be reached only by railroad and sea. Two small boats of about 4 feet draft, capacity 30 passengers, make daily trips to Preston and Mayarí.

Bocas.—Barrio and village. A small, unimportant village of about 400 inhabitants; situated on Velasco branch of Gibara and Holguín Railroad, about 5 miles west of Iberia and 12½ miles southwest of Gibara. Houses are of stone, brick, and wood, and native shacks. Has a post-office and railroad station. Name of railroad station is Hermosa. One church; stone building, 30 by 50 feet. Railroad depot is new, wooden building. No public or municipal buildings. No good camp sites.

Blanquízal, Hatico, Las Nasas, Limones, and Recreo are sitios in Bocas barrio; each consists of one or two stores and a few houses.

Cañadón.—Barrio and sitio. The sitio consists of 10 or 12 houses.

Boca de Samá is another small sitio situated in Cañadón barrio and consists of a few houses.

Candelaria.—Barrio. The barrio is situated southwest of Gibara and contains two sitios called Candelaria Afuera and Munilla; each consists of 2 or 3 native shacks.

Contimplora.—Barrio and village. A small unimportant village of probably 150 inhabitants. It is situated on the Gibara and Holguín Railroad about 6½ miles southwest of Gibara. Buildings are of wood, bark, and mud. Water obtained from wells and cisterns. Railroad has water tank. Depot is wooden building, 35 by 70 feet. There is one siding 250 yards long. No camp sites.

Fray Benito.—Barrio and village. The village is situated 7½ miles southeast of Gibara and contains 35 or 40 houses. There are 2 small stone blockhouses.

Junicúm and Rabón are sitios also situated in Fray Benito barrio; each consists of a few native shacks.

Mulas.—Barrio and sitio. The sitio is situated 42 miles east of Gibara and contains 6 houses.

Potrerillo.—Barrio and village. The village is situated 5 miles southeast of Gibara and contains 20 or 25 houses. There is also a small stone blockhouse in fair condition.

Jagüeyes, Palmarito, and Santa Rosalia are sitios also situated in Potrerillo barrio; each consists of 1 or 2 stores and a few native shacks.

Río Seco.—Barrio and sitio. The sitio is situated 39 miles east of Gibara and contains 6 houses.

Samá Arriba.—Barrio and sitio. The sitio is situated 32 miles east of Gibara and contains 5 houses.

La Juba, Retrete, and Vega de Samá are sitios also situated in Samá Arriba barrio; each contains 2 or 3 houses.

Santa Lucía.—Barrio and town. The town of Santa Lucía is situated at sugar mill of same name, 12½ miles southeast of Gibara, and is inhabited by laborers who work at the mill and on the colonias. Population, 1,183.

Bariay and Vita are sitios also situated in Santa Lucía barrio, the latter being a port and shipping point for the sugar mill.

Yabazón.—Barrio and sitio. Besides the sitio bearing its name the barrio contains the sitio of La Demajagua and village of La Caridad. The sitio of Yabazón is situated 10½ miles southwest of Gibara and contains 6 houses.

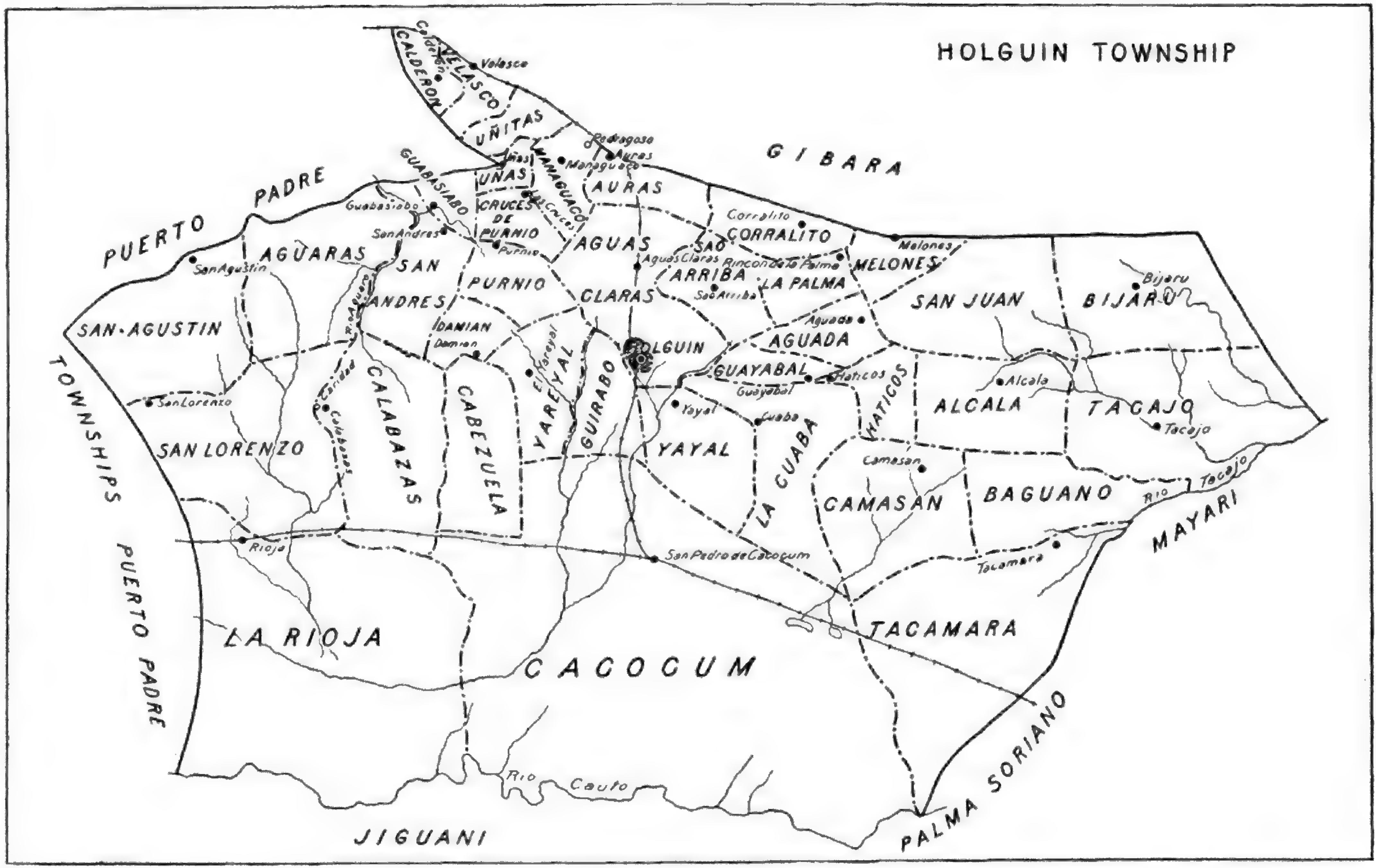
La Caridad.—Village. About 12 miles northeast of Holguín and 7 miles south of Gibara. It consists of a large office building, several stores, and between 50 and 60 dwellings. It is the terminus of the Santa Lucía Railroad, and there are good roads from Holguín via Auras. Good camp site for a large number of troops; water can be obtained from the Santa Lucía Sugar Company's plant.

La Demajagua.—A sitio in Yabazón barrio consisting of two or three houses.

Yaguajay.—Barrio and sitio. The sitio is situated 27 miles east of Gibara and contains 6 houses.

TOWNSHIP OF HOLGUÍN (CAPITAL, HOLGUÍN).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Holguín	Norte de Holguín	Urban		3.447
	Sur de Holguín	do		4,145
Aguada	Aguada	Rural	6.5	1.006
	Aguarás	do	16.2	215
Aguas Claras	Aguas Claras	do	5	1.112
Alcalá	Alcalá	do	20	1.024
Auras	Auras	do	9.5	1,258
	Báguano	do	22	253
Bijarú	Bijarú	do	30	4,326
	Cabezuela	do	8.7	532
San Pedro de Cacocúm	Cacocúm	do	12	2,630
Calabazas La Caridad.	Calabazas	do	17	1,161
Calderón	Calderón	do	18	1,603
Camasán	Camasán	do	11	266
Rioja Mir.	Ciego de la Rioja	do	25	1.376
Corralito	Corralito	do	8.5	1.316
Las Cruces	Cruces de Purnio	do	8.5	297
La Cuaba	Cuaba	do	6	576
Damián	Damián	do	9.5	710
Guabasiabo	Guabasiabo	do	12.5	793
Guayabal	Guayabal	do	4	646
	Guirabo	do	2.7	714
Haticos	Haticos	do	8	396



HOLGUIN TOWNSHIP

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Managuaco	Managuaco	Rural	11.2	744
Pedregoso.				
Melones	Melones	..do	17.5	1,029
Rincón de la Palma	Palma, La	..do	10	891
Purnio	Purnio	..do	7	954
San Agustín	San Agustín	..do	25	3,343
San Andrés	San Andrés	..do	12.5	2,810
San Juan	San Juan	..do	22	822
San Lorenzo	San Lorenzo	..do	22.5	782
Sao Arriba	Sao Arriba	..do	4.2	2,765
Tacajó	Tacajó	..do	25	846
Deleite.				
Tacámara	Tacámara	..do	20	656
Uñas	Uñas	..do	12	1,408
	Uñitas	..do	12.7	554
Velasco	Velasco	..do	17	1,551
Yareyal	Yareyal	..do	6.2	844
Yayal	Yayal	..do	3	363

Holguín.—Town. The town is situated at the southern extremity of the Gibara and Holguín Railroad and at the northern extremity of a branch of the Cuba Company Railroad, which runs out from Cacocúm, 12 miles distant. It is 174 miles northwest of Santiago, 20 miles south of Gibara, the nearest seaport, and 60 miles west of Banes Bay. Capital of judicial district of same name. Rectangular in shape; about 1 mile long and one-half mile wide, the longest dimensions running north and south. It is divided into two wards or barrios, viz, Norte and Sur.

The town is principally supported by cattle raising in surrounding country and the sugar mills of Chaparra, San Manuel, and Santa Lucía. Other industries in the town proper consist of several tanneries, a number of saddle factories, ice plant, sawmill, brickyard, and tile factory. The town has a civil and military hospital, market place, plaza, park, and three churches. Had under Spanish régime a garrison of 3,000 men; during this time a military governor resided in the town.

Population, 7,592.

Water supply: Nearly all houses are provided with underground cement cisterns and wells. Water in the wells is good. The Gibara and Holguín Railroad has a small water tank 200 yards east of the station; capacity, about 4,500 gallons; water pumped by windmill and by hand. Another windmill, with a reservoir having capacity of about 7,500 gallons, is situated 200 yards northwest of the "Quinta;" windmill out of order, but could be easily repaired. On the east side of the plaza, in front of the old Spanish barracks, are the remains of an old windmill. A cement trough 100 feet long, 2 feet deep, and 2 feet wide is connected with it and was formerly used for watering animals. After repairs made during the second intervention water was piped to the "Quinta" (then occupied by the American troops) and into a tank by a small alcohol engine.

There is no sewer system, pits and cesspools being used. No electric-light plant.

Barracks: In time of war the Catholic churches were used by the Spaniards for quartering troops. The church at the plaza San José would accommodate 100 men. San Isidro Church, at plaza Martí, would accommodate 250 men. The Quaker Church, on the northeast corner of plaza San José, would hold 75 men. The railroad station (Gibara and Holguín), situated at the northeast end of town, is an excellent new brick building, which would accommodate 100 men or would make an excellent storehouse. The only government building in the town is the old Spanish barracks; it quartered 800 men, but its present condition is little better than a ruin, and it can not be repaired. The "Quinta," used as the town's main school building, situated at the north end of town, 250 yards west of the railroad and same distance northeast of old barracks, will accommodate 275 men; was formerly a Spanish hospital. It is in fair state of repair. Ayuntamiento, largest building in town, faces the main plaza and is private property; 300 men have been quartered on the upper floor.

There are no stables. Plenty of open ground both to the east and west of town which would make suitable sites for corrals. Just east of town would be most suitable location, as the Marañon Creek runs along the east edge of town and would be nearest watering place.

The city hospital, situated at the southeast end of town, has a capacity of 100 beds and is the only one in town.

Quartermaster and commissary storehouses: None, except private buildings. A number of these buildings which would be suitable for storehouses could be procured in case of emergency. There are no tramways or railroad sidings to any of these buildings and none of them have unloading platforms. The building occupied during the second intervention as a storehouse is a very good building for the purpose and is situated on the southwest corner of the plaza San José. It is about 50 feet wide by 125 feet long.

There is no telephone central. The telegraph and post-offices are on Freixas street, one block west of main plaza.

The ice plant is at the east edge and opposite the center of the town, on the Marañon Creek. A saw mill is also run in connection with the ice plant.

Camp sites: There is plenty of open ground in the immediate vicinity of the town but water is scarce. A brigade could possibly be camped to the east, within half a mile of town, and water could be procured from the Marañon Creek. This stream rises just northeast of the town and never runs dry. Drinking water would have to be obtained well up toward its source in order to avoid the drainage from the town. Half a mile west of the north end of the town another brigade could be camped. A small stream which flows along the west edge of town rises in this vicinity, but this stream probably goes dry in the dry season and the water is not very good. The sanitary features are good and there is fair grazing, but wood is scarce. The best camp site is about 2 miles northwest of the town (beyond the hills) on the road leading to Damián; suitable for nearly any sized command. Water would be obtained from the Matamoros River, which flows along here from east to southwest, and is an excellent stream and never runs dry. Sanitary features, good; grazing, fair; wood scarce. About 2½ miles west of the town on the road to Yareyal, and on the same river, a brigade could be camped. Conditions the same as for the other location.

Defenses: The town is surrounded on all sides, except the east, by hills ranging in height from 100 to 200 feet and on all of these hills are trenches and earthworks guarding the approaches. These works are as follows:

On a round knoll three-fourths of a mile west of the town is a circular earthwork, 40 feet in diameter, which commands the Yareyal road and the town and is about 200 yards from the road; artillery was probably mounted in this position. On a hill three-fourths of a mile southwest of the above knoll is a wall of loose stones, 3½ feet high by 2 feet thick, running entirely around the crest of the hill (except for a short distance on the west end); the entire length is about 700 or 800 yards; commands the Yareyal road and a trail which branches off from the Yareyal road and leads southwest.

Five hundred yards southeast of above-named hill, on another hill (very high), is a short piece of stone wall, 3½ feet high by 2 feet thick, which commands the above-mentioned trail to the southwest. Half a mile west and southwest of the town is a ridge of hills three-fourths of a mile long, running from southeast to northwest. At the northwest end of this ridge is a semicircular trench, 150 feet long, which commands the Yareyal road. On the southwest crest of this ridge, guarding the approaches to the town from this direction, are 4 or 5 short separate trenches which are within supporting distance of each other; the total length of all of them is not over 300 yards; they average about 3 feet in depth.

A chain of hills begins about 1 mile northeast of the town and runs north of the town, the general direction being slightly north of west. On the most eastern or southeastern hill is a stone parapet, 75 feet long, facing southeast and commanding the Sao Arriba and Santa Lucía roads. Parapet is about 3½ feet high. On the south crest is another 50 feet long, and another on the north crest is also 50 feet long; 400 yards to the west, on the south crest, is another 25 feet long, and on the north crest another one 50 feet long.

Three hundred yards farther west is an inclosed work, built of loose stones, oblong in shape and about 35 feet long by 15 wide. Adjoining this on the north is another small triangular work. The walls of these works are about 3 feet thick by 3½ feet high. These works are on a very high peak and command the country both to the north and south. Seventy-five yards below this work on the southern crest is a trench 100 feet long. Four hundred yards farther west, across a depression and on another hill, are several intrenchments. One on southeast crest is semicircular in shape and 75 yards long. On southwest crest there are two; one 30 yards long and the other 20. On the northeast crest is another 150 yards long and on northwest crest another 75 yards long.

Due north of the town on a high hill is an old square brick blockhouse; not in good condition; roof is torn off, but walls are in fair condition. Surrounding this blockhouse is an old circular earthwork, 50 feet in diameter. Parapet is of loose stones and earth. This work is 500 yards north of building occupied by the American troops during the second intervention. One hundred and fifty yards farther west are the ruins of an old loose-stone blockhouse 8 feet in diameter and walls 3 feet high. Fifty yards below this, on the crest, is a trench from 2 to 3½ feet deep, extending around crest of hill from the east to west and south (200 yards long). At the south end of this trench is an old wall of loose stones, 75 feet long. On another hill, 300 yards farther west, is another trench, 3½ feet deep and 30 yards long, running from northeast and curving around to the west and south. Three hundred yards farther west, on crest of another hill, is a broad trench, 4 feet deep and 75 yards long, which curves around from northeast to west and south; commands ground to northwest and west. Four hundred yards farther west, on the northwest crest of another hill, is a short trench, 25 yards long and 3 feet deep, commanding the San Andrés road, which runs out by the foot of this hill (on the west). On a low hill three-quarters of a mile east of the town is an old earthwork, 75 yards long, guarding approaches from the east. Half a mile south of the town is a low ridge of hills running slightly north of west and south of east. On the second knoll from Cuba Company Railroad is a short parapet, 40 feet long, facing southwest. Thirty yards below this, facing in the same direction, is a short trench 3½ feet deep. One hundred yards farther east, on southern crest, is another trench 50 yards long. Thirty yards farther east, on southern crest, is a short parapet 60 feet long. One hundred yards farther east is another parapet 50 feet long, and 50 yards farther on, on the southwest crest, is another trench 80 feet long.

Thirty yards away and near the rear of this latter trench is a parapet 60 feet long facing in the same direction (southwest). Seventy-five yards farther on, on the extreme east end of the ridge, is a semicircular earthwork, 100 feet long, facing southeast. Fifty feet below this work, on the crest, is a semicircular trench, 75 yards long, commanding approaches from the southeast. Thirty yards to the north of this is a short trench, 50 feet long, facing east. All of these trenches vary from 2 to 3½ feet deep. At the northwest corner of the town, 200 yards west of the north end of the old Spanish barracks, is a circular stone blockhouse. It is in good repair and has 12 loopholes.

Railroads: Station of Gibara and Holguín Railroad is situated at the north edge of the town at the thirty-first kilometer post of the road. It is a one-story brick building, 42 by 140 feet, with a shed 25 feet wide extending over the track for the entire length of the building, and one 12 feet wide on opposite side of building. Building is new. Cuba Company Railroad has not yet built a station. When built it will be situated at south edge of town. A new water tank has just been completed near the site for the station. It is about 1 mile from one station to the other. Each railroad has one siding. Siding of Gibara and Holguín Railroad is 275 yards long, and there is a 75-yard spur to a turntable. Length of Cuba Company Railroad siding is about 300 yards. No special facilities for entraining and detraining or loading and unloading supplies.

Roads: Nine roads lead out of town, going in all directions, viz, one goes north to Gibara and points north; one northwest to Puerto Padre and points northwest; one west to Las Tunas and points west; one southwest to Las Güiras and points southwest; one south to Cacocúm and points south; one southeast to Tacámara and points southeast; one east to Banes and points east; one northwest to Sao Arriba; and another northwest to Santa Lucía and points northwest. Nearly all of these roads branch into two or more roads shortly after leaving the town.

The only line of approach not protected by hills with intrenchments is from the east. An attack from this direction would have to pass over a good stretch of fairly level and open ground. Probably the town itself could be taken from this direction with the least loss; but before the town would be tenable the surrounding hills would have to be taken. It is a question whether it would be best to first take the town from the east and then take the hills from the town side, or to take the hills in the first place.

On account of the great height and steepness of the hills to the north and northeast it would not be advisable to attack from those directions. An approach from the west develops a succession of hills, the outer ones commanding the inner, and while some of these hill are also very high, steep, and rocky, an attack from this direction is the one most likely to succeed, as the outer hills are very lightly fortified, and once taken they command the nearer hills; when these hills to the west are once taken the town is untenable.

Aguada.—Barrio and village. Point so called consists of 2 stores and several houses, and is situated on the Holguín-Tacajó road, 6½ miles east of Holguín.

Aguarás.—Barrio. A locality situated about 30 miles a little north of west of Holguín and contains no settlement.

Aguas Claras.—Barrio and village. The village is situated on the Holguín-Gibara Railroad, 5 miles north of Holguín, and consists of 2 stores and 5 houses. The station is an old wooden building, one-story, 25 by 60 feet; not in good repair. There is a shed 25 feet wide over track for entire length of building. Sidetrack at this point is 175 yards long.

Alcalá.—Barrio and village. Point so called is situated 20 miles slightly south of east of Holguín and consists of a store and ten or twelve houses.

Auras.—Barrio and village. The village is situated on the Gibara and Holguín Railroad, about 9½ miles slightly east of north of Holguín. Nearly all houses are of brick or stone, but the village is old and most of the houses are in bad repair. Surrounding country is very hilly.

Population, about 400. Water obtained from wells and cisterns. No sewer system, and pits and cesspools are used. No lighting plants.

Buildings suitable for barracks are: A stone building, 30 by 120 feet, situated south of plaza; originally built by a sugar planter for his employees; now used for private dwellings; not in good condition. A church, 40 by 75 feet, built of stone, situated east of plaza and about 30 yards east of railroad. No other buildings except private houses. There are no public or municipal buildings in the village.

No stables and no suitable place for corral nearer than a mile and a half, and this would not be large or very desirable. Nearest water is a small stream 1½ miles to the west. The Yabazón River is 2 miles to the east; this is an excellent stream.

No hospital or building suitable for same. No warehouses: private houses and railroad depot (a wooden building, 25 by 150 feet) would have to be used. Post-office is about in center of town. Railroad station at north end of town. There is a railroad telephone in depot, but no telegraph office. No camp sites for any large force.

The village is surrounded by hills, and 5 stone blockhouses occupy these hills. At the south edge of the town are 3 of them in line. One lies 400 yards east of railroad track, another 100 yards west of railroad track, and the third 300 yards west of the second. Another is situated at the north end of the town on a hill 150 yards east of the depot. The fifth occupies a hill to the west of the town. These blockhouses, especially the walls, are in fairly good repair.

Gibara and Holguín Railroad passes through the village. There is one siding 175 yards long. Depot is a wooden building, 25 by 100 feet. No special facilities for entraining and detraining troops or loading and unloading supplies.

Road from Holguín to Gibara passes through village from south to north. A road leads west to Las Bocas and Velasco, another slightly southwest to Uñas, and one east to Yabazón and Caridad.

The town lies in a kind of hollow and in case of attack the surrounding hills would first have to be taken. More cover would probably be afforded in an attack from the north.

Báguano.—Barrio. A locality containing no settlement and situated about 12½ miles southeast of Holguín.

Bijarú.—Barrio and village. The village is situated 30 miles east of Holguín and consists of 1 or 2 stores and several native houses.

Cabezuela.—Barrio. A locality situated 12½ miles southwest of Holguín and containing no settlement.

Cacocúm.—Barrio and village. The village is known as San Pedro de Cacocúm. It consists of about 50 palm and 5 wooden houses situated on the Cuba Company Railroad 12 miles south of Holguín. Its only importance lies in the fact that it is the nearest railroad point for the Bayamo country, and from it a branch of the Cuba Company Railroad runs out to Holguín.

Population about 350. Water obtained from wells and cisterns. No buildings suitable for barracks or stables. Suitable ground for small corrals could be found north and west on Holguín River; water would be procured from Holguín River, but this stream gets very low in dry season. There are no buildings suitable for a hospital. No warehouses except railroad station, which is a small, wooden building, 30 by 40 feet, and is situated about the center of the north side of town. Post-office is opposite railroad station and 50 yards distant. No telegraph office other than railroad telegraph. No camp site for any good-sized command and no defenses. Cuba Company Railroad has one sidetrack probably 400 yards long and also a Y, where Holguín line branches off; no loading platform, but sufficient open space for loading and unloading just east of depot; sufficient open space on south side of track for entraining and detraining a brigade, but there is only one siding.

There is a road leading north to Holguín and one south to Bayamo; no others of importance.

Best direction of attack is from the north or northeast.

Calabazas.—Barrio and sitio. Barrio is a district lying west of Holguín and contains the sitio La Caridad, besides the sitio bearing its name. The sitio is 17 miles from Holguín on road to Las Tunas. It consists of a general store, a schoolhouse, and two or three dwellings in the immediate vicinity. About one-fourth of a mile to the east there is a cemetery.

La Caridad.—Sitio. A settlement consisting of a general store and 7 or 8 houses and situated on Holguín-Tunas road, three-fourths of a mile west of Calabazas. Water from well.

Calderón.—Barrio and village. Point so called is situated 18 miles northwest of Holguín, and consists of a store and several houses.

Camasán.—Barrio and sitio. Point so called is situated 11 miles southeast of Holguín, and consists of a store and 2 or 3 houses.

Ciego de la Rioja.—Barrio. Contains 2 small stations, Rioja and Mir, on Cuba Company Railroad; about 2 miles apart.

Rioja.—Village. Situated about 25 miles by road southwest of Holguín, on Cuba Company Railroad. Consists of a large sawmill, a restaurant, a store, 8 houses, section house, and water tank.

Mir.—Village. Situated about 27 miles by road southwest of Holguín, on Cuba Company Railroad. Has railroad telegraph office, a church, 3 stores, and 10 houses.

Corralito.—Barrio and sitio. Point so called is 8¼ miles northeast of Holguín, and consists of a few native huts in two groups about one-half mile apart. Has schoolhouse.

Cruces de Purnio.—Barrio and village. The village is known as Las Cruces and is 8½ miles northwest of Holguín on branch of road to Velasco, and 2½ miles south of Uñas. It consists of 2 general stores and a number of scattered houses. There is a camp site about 1 mile west.

Cuaba.—Barrio and sitio. The sitio consists of about 8 native huts situated 6 miles southeast of Holguín. A camp site near.

Damián.—Barrio and village. Village is 9½ miles by road west of Holguín. Consists of 3 general stores, a dance hall, and about 6 native houses.

Guabasiabo.—Barrio and sitio. Point so called consists of 2 stores and several houses, and is on the Uñas-San Andrés road 12½ miles northeast of Holguín.

Guayabal.—Barrio and sitio. Point so called consists of a store and a few houses, and is situated 8 miles east of Holguín.

Guirabo.—Barrio. A locality containing no settlement.

Haticos.—Barrio and village. Point so called is situated 8 miles southeast of Holguín, and consists of a store and a few houses scattered about.

Managuaco.—Barrio and village. Point so called is situated 11¼ miles northwest of Holguín, and consists of a tienda and about 10 houses.

Pedregoso.—Village. On the Auras-Uñas road about 4 miles west of Auras. Consists of 8 houses.

Melones.—Barrio and sitio. The sitio is situated 17½ miles south of Holguín by road and 4 miles south of San Pedro de Cacocúm; near a large lake. It consists of about 3 houses.

La Palma.—Barrio and sitio. The sitio is 10 miles northeast of Holguín and is known as Rincón de la Palma. It consists of a few native huts; there is a large camp site near.

Purnio.—Barrio and sitio. Sitio is 7 miles northwest of Holguín at a crossroads on road to Chaparra. It consists of a general store and about 6 scattered houses.

San Agustín (de Aguarás).—Barrio and village. The village is situated on the San Andrés-Las Tunas road, 25 miles slightly north of west of Holguín, and contains 20 or 25 houses. Water obtained from a well.

San Andrés.—Barrio and town. This is a town of about 1,000 inhabitants, situated 12½ miles northwest of Holguín on Holguín-Puerto Padre road. It has a telegraph office and post-office. Is of no particular importance. Has no defenses and no good camp sites in vicinity.

San Juan.—Barrio and sitio. Point so called is situated 22 miles southwest of Holguín, and consists of a store and 3 houses.

San Lorenzo.—Barrio and sitio. Point so called consists of a store and 3 houses, situated on Holguín-Las Tunas road, 22½ miles from Holguín.

Sao Arriba.—Barrio and sitio. The sitio is situated 4¾ miles northeast of Holguín and consists of 4 stores and about 20 scattered houses, none of which are suitable for military purposes.

Tacajó.—Barrio and village. The barrio contains the villages of Tacajó and Deleite. The village is situated 25 miles southeast of Holguín and consists of about 15 scattered houses and a post-office. It is the headquarters for the Tacajó Sugar Company. There is a camp site in the vicinity for a brigade; water from Tacajó River.

Deleite.—Village. Situated 8½ miles by railroad from Antilla, the Nipe Bay terminus of the Cuba Company Railroad. The population is about 60. It has about 15 one-story frame buildings, a post-office, and a private telephone line connecting with the United Fruit Company, Nipe Bay Company, and Saetía. A camp site for one battalion. There is some malaria here.

Tacámara.—Barrio and village. The village consists of one or two stores and a few shacks; situated 20 miles southeast of Holguín.

Uñas.—Barrio and village. The village has a post-office and 30 houses; situated on the Holguín-Velasco road, 12 miles northwest of Holguín.

Uñitas.—Barrio. This barrio has no settlements.

Velasco.—Barrio and town. The town is small and of but little importance. It is situated 17 miles northwest of Holguín at the end of the Velasco branch of the Gibara-Holguín Railroad. At this place the Chaparra Railroad connects with this branch. No industries other than agriculture. Population about 1,000. There is an old church in ruins. Water is obtained from wells, cisterns, and the Mano River. This is a good stream that never runs dry. Regimental camp site west of town in an open space along Mano River.

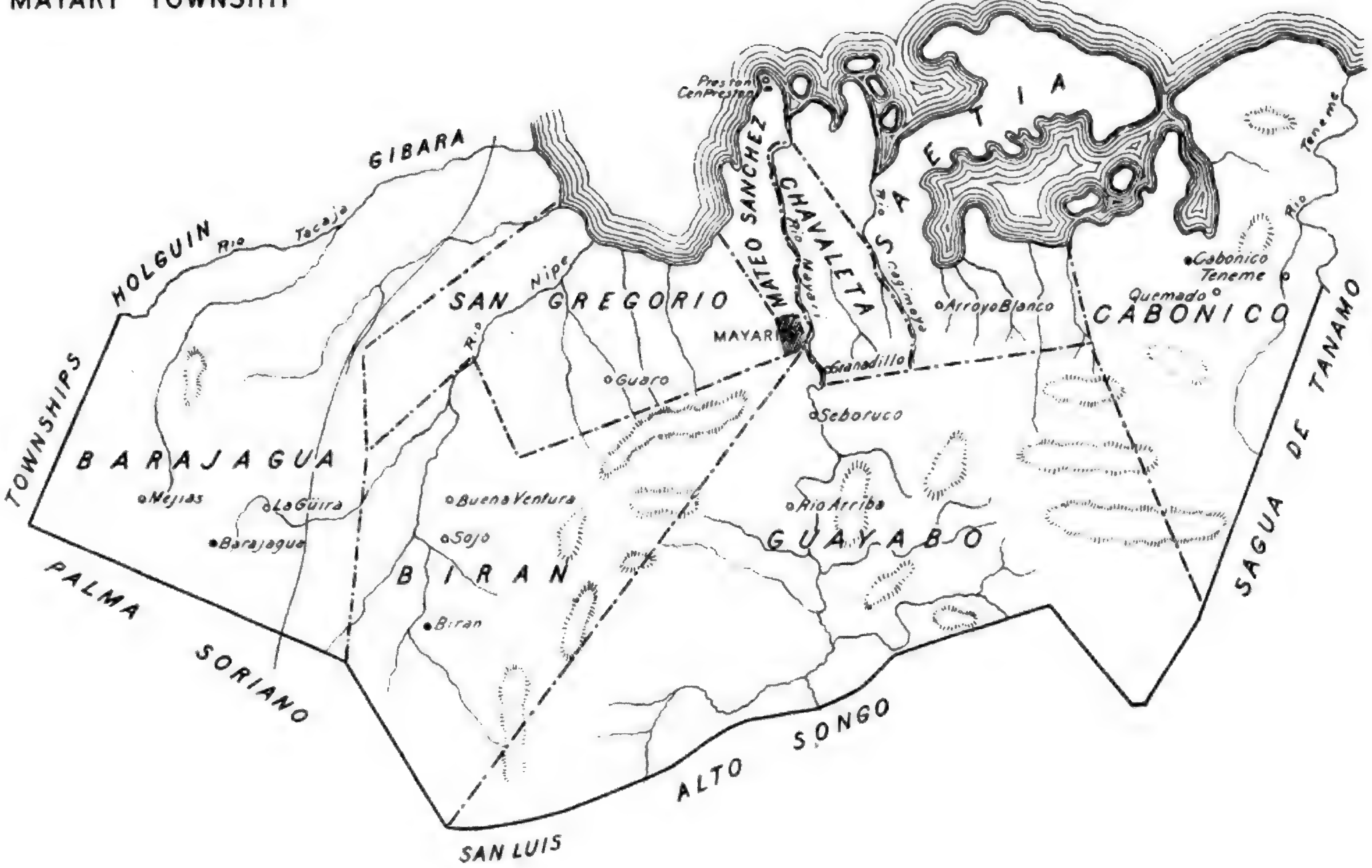
Gibara-Holguín Railroad depot is a new two-story frame building and is in good condition. Size, 30 by 60 feet. There is a railroad telephone office at the depot. The two railroads that enter here use the same depot. There is a siding 125 yards long, and a **Y** formed by the branch road with the main line.

Roads run south to Holguín; east to Gibara; north to Las Vegas; also north to Chaparra.

Yareyal.—Barrio and village. The village consists of 2 general stores, a schoolhouse, and about 15 houses. It is situated 6¼ miles west of Holguín on the Holguín-Tunas road.

Yayal.—Barrio and sitio. The sitio is situated about 3 miles southeast of Holguín on the Holguín-Santa Cruz road. It consists of about 5 houses.

MAYARI TOWNSHIP



TOWNSHIP OF MAYARÍ (CAPITAL MAYARÍ).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Mayarí	San Gregorio	Rural and urban.		4,046
Cocal.				
Juan Vicente.				
Guaro.				
Barajagua	Barajagua	Rural	20	1,717
Jagüeyes.				
Güira (La).				
Mejías.				
Palmarito.				
Santa Isabel.				
Birán	Birán	do	16	2,280
Buenaventura.				
Sabanilla.				
Sojo.				
Cabonico	Cabonico	do	14.5	600
Barradoras.				
Quemado.				
Téneme.				
Cajimaya	Chavaleta	do	1.8	2,423
Chucho.				
Granadillo.				
Guayabo.				
Sabaneta.				
Arroyito	Guayabo	do	2.5	1,859
Piedra Gorda.				
Río Arriba.				
Seboruco.				
Seboruquito.				
Preston	Mateo Sánchez	do	1.8	3,512
Botija.				
Chucho.				
Guava.				
Manglito.				
Playa de Manteca.				
Punta Tabaco.				
Saetía	Saetía	do	12.5	1,172
Arroyo Blanco.				

Mayarí.—Town. The town is in San Gregorio barrio and on the west bank of Mayarí River, 12 miles from its mouth. It is 7 miles by road south of central Preston on Nipe Bay and about 55 miles by road and trail north of Santiago. It is about 1 mile long and only two streets wide. It is built along the bank of the river, and consists in great part of thatched-roof palm huts, though the newer houses are mostly frame, with corrugated iron roofs. Prior to the Spanish-American war it was a mere village of practically no importance. At present it is in a very prosperous condition and in the heart of a rich and rapidly developing community. It is difficult to reach, being accessible only by means of boats up the river and by muddy trails. The surrounding country for a radius of 5 or 6 miles is very thickly settled. The principal products are cane and tobacco. The seaport for the town is Antilla, north terminus of the Nipe branch of the Cuba Company Railroad, and 21 miles distant on west side of Nipe Bay. At Antilla vessels of 18-feet draft may approach the wharf. Communications with Antilla and other points on Nipe Bay are had by means of light-draft boats (3 to 4 feet), which ply between Antilla and Mayarí via the river. The river is full of bars, which make navigation difficult for anyone not familiar with them. Its head of navigation is at Mayarí. Two small steam yachts carrying passengers and small freight make daily trips to Antilla. Sailboats (4 to 10 tons) also ascend the river to Mayarí.

Population of town is 2,746.

Water supply is obtained from the Mayarí River. Quantity unlimited and quality excellent if obtained above city. Liable to pollution from residences along banks of the stream. Distributed, as a rule, by means of carts or mud sledges, though a few private houses are supplied from a tank which is filled from the river by means of a windmill. Animals may be watered in the river at the ford near north end of town, and at numerous other places and streams in that locality.

There are three frame buildings in the north end of town which served as barracks for Spanish troops and are now occupied by the rural guard; one-story, corrugated iron roofs; in bad state of repair; no modern closets; capacity, 50 men each. No other buildings suitable for use as barracks.

There are no stables and no storehouses except private buildings. No transportation corrals, but there is open pasture west of and immediately adjoining town. No hospital and no building suitable.

Post-office and telegraph office in the same building, situated on west side of principal street (calle Real) opposite north end of plaza. Telegraph to all parts of the island. Telephone to Punta Tabaco, Banes, and Saetía.

Good camp site for a brigade in open pasture on rolling ground west of town. Water for men and animals from Mayarí River, one-eighth of a mile distant. Fuel and grass near by.

On top of hill about 150 feet high, just west of town, is an old Spanish redoubt about 40 feet in diameter; no water supply; no buildings. It commands the town and surrounding country.

There are no roads that army wagons could be taken over during wet seasons. During dry seasons the road leaving town on west past cemetery (commonly called "Camino de Holguín"), could be traveled as far as Santa Isabel, about 12 miles west, and by bull carts to the Cuba Company Railroad at Barajagua (railroad name Cauto or station No. 3), about 20 miles west of Mayarí. This road crosses the Nipe Bay Company's railroad about 3 miles west of Mayarí; to this point it is in fair condition most of the year.

The Cuba road is passable by bull carts in dry season for about 6 miles from Mayarí, and with slight expense could be made passable for bull carts to San Luis. It leaves the town at the south end and bears to southwest at Cocal. This trail is broad, but would be impracticable for anything but pack trains. It follows the telegraph line to San Luis, from which point to Santiago there is a macadamized road. Bull carts can be taken a short distance (2 miles) east of Mayarí on the Sagua trail. This trail soon becomes impassable except for pack trains, and even these in the very best of weather would have great difficulty in getting through.

There are no metaled roads in the valley. Mud sledges are the common transports for loads, though many plantation trails permit use of carts in dry season.

Town if defended could best be approached by land from Punta Tabaco (Preston) via Nipe Bay Railroad, turning east just before reaching Holguín trail and securing heights that command town. These heights can best be secured by approach from west-northwest. This would be the most direct and feasible approach, using Preston as a base, which point could be easily secured by fleet. Railroad could transport artillery if necessary to point where its service would be needed. To approach from any other direction would require more time and labor, limit the operation to infantry, with possibly some mountain batteries, and make problem of attacking force that of passing through narrow defile.

San Gregorio barrio contains, besides the municipal capital, the village of Juan Vicente and sitios Cocal and Guaro.

Juan Vicente.—Village. A small village situated 3 miles northwest of Mayarí and 1 mile south of Nipe Bay on the

Nipe Bay Company Railroad. Cart road connecting with wagon road to Mayarí.

Cocal.—Sitio. Situated 1½ miles south of Mayarí and consists of a number of scattered houses on the road from Mayarí.

Guaro.—Sitio. A number of houses situated on the colonia Guaro, 7 miles west of Mayarí and 3 miles south of Nipe Bay. Water obtained from Guaro River. The Nipe Bay Company Railroad connects with Guaro, and a branch extends north 2 miles to Guaro Embarcadero on the Nipe River. Wagon road to Mayarí.

Barajagua.—Barrio and sitio. Besides the sitio of the same name, the barrio contains the following sitios: La Güira, Jagüeyes, Mejías, Palmarito, and Santa Isabel.

The sitio of Barajagua is situated 20 miles southwest of Mayarí on the wagon road from Mayarí to Holguín. It consists of a general store and several scattered houses.

La Güira.—Sitio. Consists of 2 or 3 scattered houses situated about 1 mile south of Barajagua. Trail to Barajagua.

Jagüeyes.—Sitio. Situated 3½ miles northeast of Barajagua on the Cuba Company Railroad and on the wagon road from Mayarí to Holguín. Consists of 3 houses.

Mejías.—Sitio. Situated 3 miles west of Barajagua and consists of about a dozen houses. Water is obtained from Mejías River. Large camp site north of the sitio. Wagon road runs east, crossing Cuba Company Railroad at Jagüeyes, and extends to Mayarí. A wagon road runs northwest to Holguín and one southwest to San Germán, on Cuba Company Railroad.

Palmarito.—Sitio. Situated 6 miles northwest of Barajagua on wagon road from Holguín to Mayarí. Consists of a number of scattered houses.

Santa Isabel.—Sitio. Situated 10 miles west of Mayarí on the wagon road from Mayarí to Holguín. Consists of 7 houses and ruins of 2 forts.

Birán.—Barrio and village. Besides the village of the same name, the barrio contains the villages of Sabanilla and Sojo and the sitio Buenaventura.

The village of Birán is situated 16 miles southwest of Mayarí on trail extending south to Palmarito. Consists of a store and 6 houses.

Buenaventura.—Sitio. Situated 5 miles northeast of Birán on trail to Mayarí. Consists of about 9 houses. Water obtained from Buenaventura River; quality good.

Sabanilla.—Sitio. Situated 2½ miles south of Birán on trail to Mayarí. Consists of a store and 8 houses. Water obtained from Sabanilla River; quality good.

Sojo.—Village. Situated 3 miles north of Birán on trail to Mayarí and is a village of 20 or 30 shacks. Water obtained from Sojo River; abundant and plentiful. Good camp site for a regiment.

Cabonico.—Barrio and village. Besides the village of the same name, the barrio contains the following sitios: Barradoras, Quemado, and Téneme.

The village is situated 14½ miles east of Mayarí on trail from Mayarí to Sagua de Tánamo. Consists of 5 houses, 2 general stores, a schoolhouse, and a blacksmith shop, and has about 30 inhabitants. Water obtainable from San José River, a stream 18 to 20 feet wide and 12 to 18 inches deep; water clear and running. Good camp site in vicinity, with grazing, wood, and water.

Barradoras.—Sitio. Situated 7 miles northeast of Cabonico on Tánamo Bay. Consists of 2 houses.

Quemado.—Sitio. Situated 2 miles east of Cabonico on the trail to Tánamo. Consists of 3 houses. Camp site for 1 battalion, with wood, water, and grass near by; in dry season there is no water.

Téneme.—Sitio. Situated 4 miles east of Cabonico on the trail to Tánamo. Consists of 4 houses. Water obtained from branch of Téneme River.

Chavaleta.—Barrio. The barrio is east of Mayarí and includes Cajimaya, Chucho, Guayabo, Granadillo, and Sabaneta, all small places along trail east of Mayarí. Each consists of 1 or 2 houses. No point named Chavaleta.

Guayabo.—Barrio. The barrio is situated south of Mayarí and includes Seboruco, Seboruquito, Arroyito, Piedra Gorda, and Río Arriba, all small places scattered along trail south of Mayarí. Each consists of 2 or 3 houses. No point named Guayabo.

Mateo Sánchez.—Barrio. Situated north of Mayarí and contains the town of Preston and the following sitios: Botija, Chuco, Guava, Manglito, Playa de Manteca, and Punta

Tabaco; each consists of a few huts situated on trails leading from Mayarí to the coast. Of no military importance.

Preston.—Town. Situated 7 miles north of Mayarí and on Nipe Bay. It is made up of the Preston sugar mill, with its employees and dependents. It occupies the site of a small settlement formerly known as Punta de Tabaco on the point of land bearing that name. Population about 3,000, which varies. Water is pumped from Mayarí River and stored in 3 steel tanks. There is a sawmill, ice machine, cold storage, roundhouse, post-office, telegraph station, and machine shop.

Saetía.—Barrio and village. Besides the village of the same name, the barrio contains the sitio Arroyo Blanco.

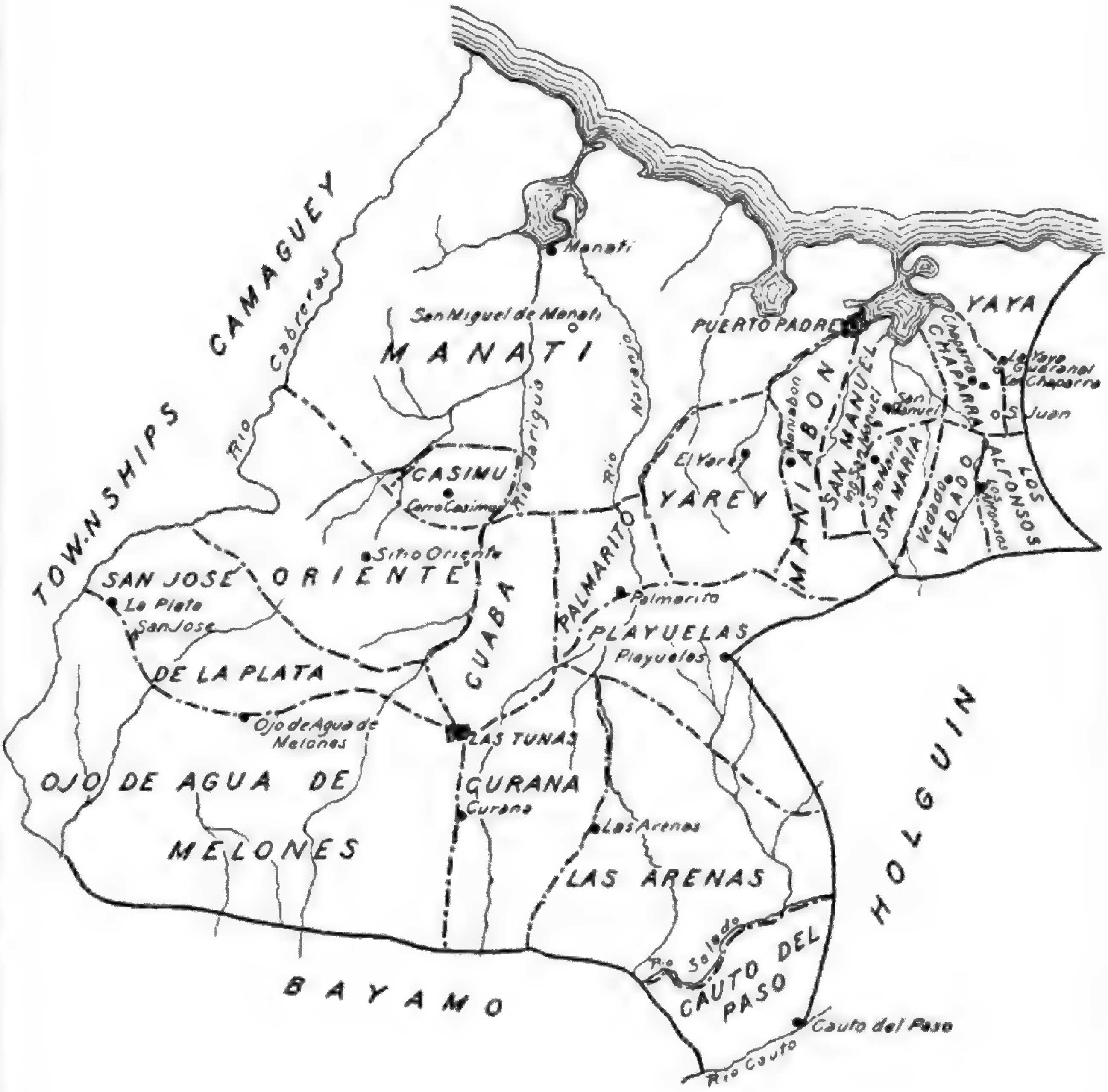
The village of Saetía is situated about 12 miles northeast of Mayarí at Punta Carenero, on the coast at the entrance to Nipe Bay. It consists of about 15 houses. Telegraph to all parts of the island.

Arroyo Blanco.—Sitio. Situated 6 miles east of Mayarí on trail to Tánamo. It consists of 2 huts. Water is obtained from Arroyo Blanco.

TOWNSHIP OF PUERTO PADRE (CAPITAL, PUERTO PADRE).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Puerto Padre	Norte	Urban		922
	Sur	..do		1,251
Alfonsos	Alfonsos	Rural	13	2,243
Las Arenas	Arenas	..do	40	896
Cerro Caisimú	Caisimú	..do	30	706
Cauto del Paso	Cauto del Paso	..do	50	984
Chaparra	Chaparra	..do	9	4,069
Cañal.				
San Juan.				
Guaranal.				
Tejacón.				
Vega de Manos.				
La Cuaba	Cuaba	..do	32.5	1,543
Curana	Curana	..do	38	2,500
Manatí	Manatí	..do	21	519
San Miguel.				
Maniabón	Maniabón	..do	7	792
Ojo de Agua de Melones	Ojo de Agua de Melones	..do	42	1,123
Oriente	Oriente	..do	28	1,246
Palmarito	Palmarito	..do	24	890
Playuelas	Playuelas	..do	24	907
Plata	San José de La Plata	..do	53.7	897
San Manuel	San Manuel	..do	5	3,771
Santa Bárbara.				
San Pedro.				
Santa María	Santa María	..do	9	1,275
Vedado	Vedado	..do	15	1,889
Victoria de las Tunas	Primero de Tunas	Urban		997
	Segundo de Tunas	..do	33	1,150
Yarey	Yarey	Rural	11	839
La Yaya	Yaya	..do	15	2,652

PUERTO PADRE
TOWNSHIP



Puerto Padre.—Town. Town is situated on north coast of Oriente Province, about 38 miles by road northeast of Holguín, 135 miles by road northeast of Santiago, and 40 miles by water from Gibara. It is divided into two wards or barrios, viz, Norte and Sur. It is the port for Chaparra and San Manuel sugar mills. Town is supported by these mills. Chaparra is 10 miles east and San Manuel is 5 miles south. A private railroad runs to the San Manuel mill and another one connects San Manuel mill with Chaparra mill. The former is owned by Francisco Plá, who is the principal stockholder in the San Manuel Sugar Company, and owns the land on which Puerto Padre is situated, as well as all of the principal buildings and many of the less important ones. No public or municipal buildings in the town. Population, 2,173.

Water obtained from wells and cisterns. No sewer system; pits and cesspools used for waste. No lighting plant. One regiment might find shelter in private houses in case of emergency. No stables or corrals and no places suitable for latter. One hospital, owned and maintained by municipality; capacity, 50 beds; situated 500 yards south of wharf. One large storehouse at wharf; dimensions, 50 by 150 feet; sidings of San Manuel Sugar Company's railroad near it. Custom-house is a rented building situated on town plaza 100 yards east of wharf; on railroad line; new building in good repair; size, 20 by 100 feet; tram cars pulled by horses connect it with wharf. The dimensions of the wharf are 20 by 100 feet, and it reaches 8 feet of water at low tide. The San Manuel Railroad extends onto it. Ships anchor 2 to 3 miles out and cargoes are lightered. The San Manuel Sugar Company has a tug and 3 lighters in the harbor; others at Cascarero owned by the Chaparra Company.

Telegraph and post-office in same building, 200 yards south of wharf. Government telegraph line, connected with all points. No railroad station.

No camp site near by, but 10 miles southwest, at Vásquez, is a fine site which would accommodate a command of any size up to a division. Good water, sufficient for men and animals, obtained from a small lake, evidently supplied by springs; never dries. The grass is exceptionally fine, there being 7,000 acres of pasturage in immediate vicinity.

The ruins of an old fort are on a hill to the south of town. The fort could be easily rebuilt at small cost, as the necessary material is near at hand. It could be made to accommodate two companies. The approaches to the town are commanded by the hill on which the ruins stand and another hill 600 yards east of it.

The following roads lead out of town: One west to Manatí; one southwest to Las Tunas; one south and east to Chaparra; and one southeast to Holguín.

Town could best be taken from the sea. On the land side the hills above referred to protect the town.

Alfonsos.—Barrio and village. Village is situated 13 miles from Puerto Padre on the Holguín-Puerto Padre road and consists of 15 or 20 houses.

Arenas.—Barrio and sitio. The sitio Las Arenas is about 40 miles southwest of Puerto Padre on the wagon road running from Victoria de las Tunas to Bayamo, the road continuing to Puerto Padre; it is also on the Río Palmillas. It consists of about 10 native houses.

Caisimú.—Barrio and sitio. Sitio called Cerro Caisimú consists of 8 native houses.

Cauto del Paso.—Barrio and sitio. The sitio is about 50 miles slightly west of south of Puerto Padre and is connected therewith by wagon road. It consists of 3 stores and about 8 native houses.

Chaparra.—Barrio and town. Besides the town of Chaparra the barrio contains Canal, Guaranal, San Juan, Tejacón, and Vega de Manos.

The town is 9 miles east of Puerto Padre and 31 miles northwest of Holguín. It is made up of the buildings of the Chaparra sugar mill and homes of the employees. All buildings are of frame and the streets are laid out from east to west and north to south.

Population, about 3,000, which varies.

Drinking water is obtained from five wells, four of which are supplied with windmills and elevated tanks; quality excellent; quantity ample. Water for general use pumped from Chaparra River to an elevated water tower and piped to buildings; quality good and quantity unlimited.

All buildings which would be of military service are property of the Chaparra Company and pertain to the mill. The company maintains a hotel, and there are about 75 houses for employees. The state of repair and sanitary condition of all buildings are good.

Immediately north of the mill there is suitable ground for a corral; water from Chaparra River on east side of mill.

The railroad and telephone offices are at the mill. Post and telegraph office, 500 yards west of mill.

Five miles southeast, just north of San Cristóbal, is a camp site for a brigade. Good water and grass available, and wood can be obtained about three-fourths of a mile east of the site.

Railroad facilities for entraining and detraining a division on the Chaparra Railroad, which connects with the Gibara-Holguín Railroad at Velasco.

Roads lead from town west to Puerto Padre; southeast, via Velasco and Uñas, to Holguín; and south, via San Andrés, to Holguín.

All immediately surrounding country is flat and, excepting sugar-cane fields, open. No choice for direction of an attack, except that on east side the Chaparra River would furnish somewhat of an obstacle for cavalry and artillery.

Cañal.—Village. Situated 11 miles southeast of Puerto Padre and about 1 mile southeast of Chaparra, on the Holguín-Chaparra road. It consists of about 15 houses.

San Juan.—Village. Situated about 14 miles southeast of Puerto Padre, on the Gibara and Holguín Railroad and on the Chaparra-Holguín road. It consists of about 30 houses.

Guaranal.—Village. Situated about 15 miles south of east of Puerto Padre, on a branch of Gibara and Holguín Railroad, and is connected with Chaparra by wagon road. It consists of about 15 houses.

Tejacón is a sitio, with about 3 houses, and Vega de Manos contains about 12 houses.

Cuaba.—Barrio and sitio. The sitio consists of about 15 houses.

Curana.—Barrio and sitio. Barrio is a farming district lying southwest of the capital. The sitio is on the wagon road leading south from Victoria de las Tunas and 5 miles distant therefrom. Consists of 2 houses.

Manatí.—Barrio and village. A fishing settlement consisting of 2 stores and 8 houses; situated on Manatí Bay 21 miles northwest of Puerto Padre and connected therewith by wagon road. At the southeast entrance to settlement is an old earthwork, 65 feet square, with bastioned corners, commanding the principal road into the place. At the northwest edge are the ruins of an old stone fort.

San Miguel.—Sitio. Situated about 8 miles south of Manatí and about 20 miles west of Puerto Padre. It is on the wagon road running from Victoria de las Tunas to Manatí Bay. It consists of about 5 houses.

Maniabón.—Barrio and village. Village is situated 7 miles southwest of Puerto Padre, on the Puerto Padre-Las Tunas road and on the Maniabón River. Consists of 15 or 20 houses. At this point was established an old Spanish hospital which is made up of nine separate wooden buildings, all the same size—15 by 50 feet. They have galvanized-iron roofs and are raised well off the ground. They are not occupied and are not in good repair, as the natives are destroying them piecemeal. At the west end of this hospital, near the river and commanding the road, is an old earthwork.

Ojo de Agua de Melones.—Barrio and village. The village is about 42 miles southwest of Puerto Padre and 11 miles west of Victoria de las Tunas, with which it is connected by wagon road. It consists of about 20 houses.

Oriente.—Barrio and village. The village is about 28 miles southwest of Puerto Padre; consists of 3 stores and 15 houses.

Palmarito.—Barrio and sitio. The sitio is about 24 miles southwest of Puerto Padre and is on the wagon road running from Puerto Padre to Victoria de las Tunas; consists of 3 or 4 native shacks.

Playuelas.—Barrio and sitio. The sitio is about 13 miles east of Victoria de las Tunas and about 24 miles southwest of Puerto Padre, on the Tunas-Holguín wagon road; consists of one or two stores and several houses.

San José de la Plata.—Barrio and sitio. The sitio, called Plata, consists of about 12 houses.

San Manuel.—Barrio and town. Besides the town the barrio contains the settlements of Santa Bárbara and San Pedro. The town is 5 miles south of Puerto Padre and is connected therewith by the San Manuel Railroad and by cart road. It is made up of the buildings of the San Manuel sugar mill and the homes of its employees. Population, about 1,000. Water from wells and a spring; pumped from latter source into an iron tank. No buildings suitable for use by troops. No camp sites in vicinity. A regiment could camp in immediate vicinity of mill in dry season, but ground is low and flat. Telephone to Puerto Padre and to Chaparra. Besides the road to Puerto Padre a cart road leads northeast to Chaparra, one southeast to road to Holguín, and one southeast to connect with the wagon road to Victoria de las Tunas.

Santa Bárbara.—Sitio in San Manuel barrio consisting of 3 or 4 houses.

San Pedro.—Village. About 12 miles by cart road south of Puerto Padre. It is a small settlement with 2 general stores. Water from wells.

Santa María.—Barrio and village. The village is 9 miles south of Puerto Padre on the Holguín-Puerto Padre road and on the Santa María River. Consists of 15 or 20 houses.

Victoria de las Tunas.—Town. On the Cuba Company Railroad, about 33 miles by road southwest of Puerto Padre and 50 miles due west of Holguín. Divided into two urban barrios, Primero and Segundo. Houses are principally of brick and stone; some wooden ones and a number of thatched huts. There is a church building, wood, 30 by 75 feet, and there are 4 schools. Town was totally destroyed by General García in 1897 after a siege, and, as a consequence, there are no public or municipal buildings. Principal industries are exportation of cattle and lumber. There are 2 brickyards on southeast outskirts of town. Population, 2,147.

Water supply is obtained from wells and cisterns and streams. A small stream rises from an excellent spring about 500 yards east of Cuba Company Railroad depot. There is also an excellent stream, Río las Tunas, coming from the northwest, which flows west and south of the town. There is no sewer system; cesspools or pits are used. No lighting plant. There are no buildings in the town that would be suitable for barracks, except, possibly, some of the stores and the church building. All buildings in the town are private property and were built for private use. There are no stables and no corrals. Plenty of open ground both north and west. Good stream just west of town and spring one-half mile northeast where water could be obtained.

There is one small civil hospital, which is in a private building. A large stone hotel has just been completed by an American company; situated 250 yards north of depot; would make excellent hospital; water procured from well and cistern; modern water closets.

No warehouses. Railroad station, one-half mile northeast of town. Telegraph and post-offices are in same building on Colón street near center of town.

North and west of town the country is open and practically level, with good camp sites for any command up to a division. To the west is a good stream. To the northeast a good spring. Some water could also be procured from railroad tank. This is pumped from a well by steam pump. Sufficient wood could be procured from surrounding country. Grazing is good.

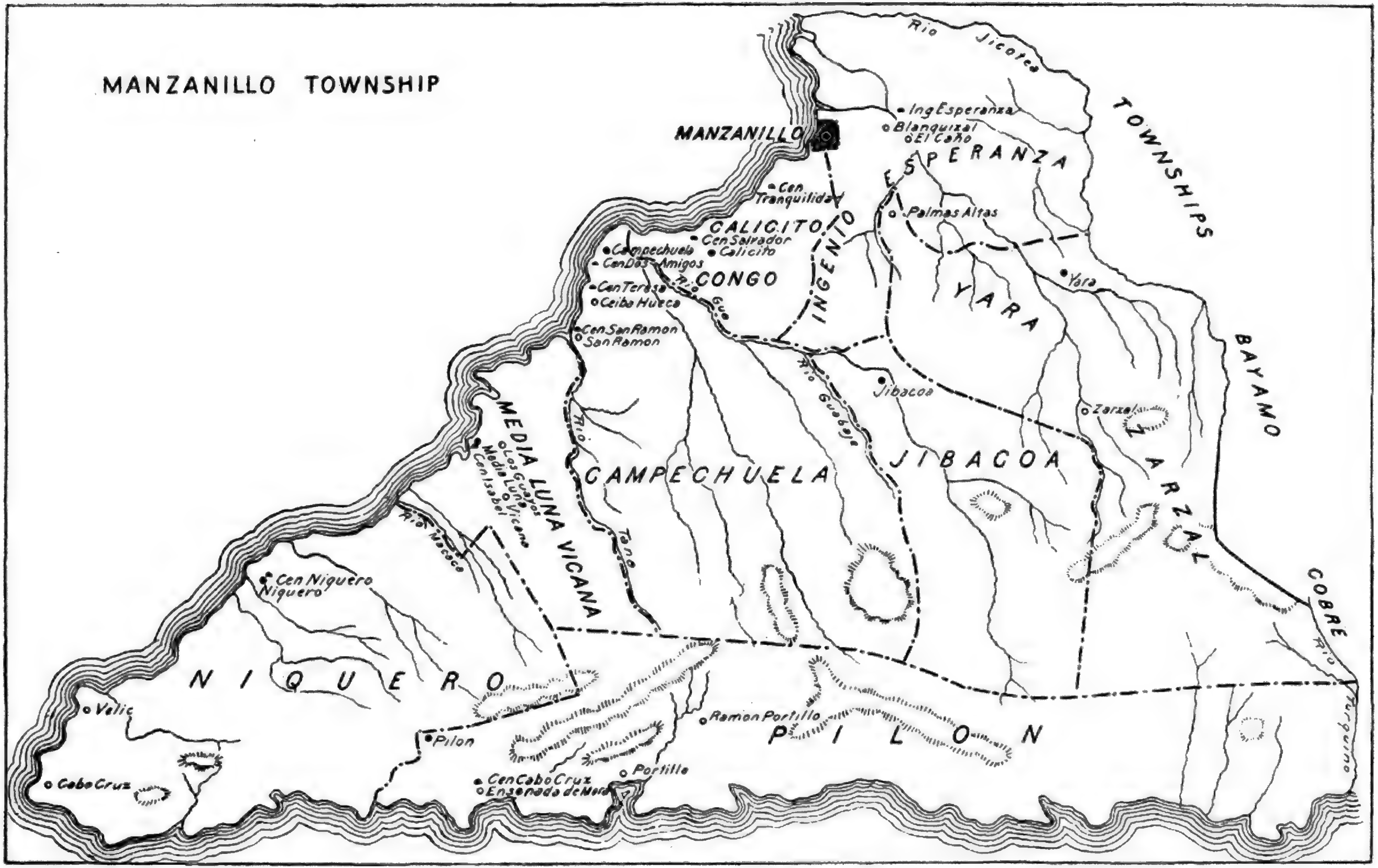
There are some low hills from 1,500 to 2,000 yards east and south of the town. Earthworks on these hills command the town, and it was here the Cubans placed their guns when they took the town in 1897; no other defenses.

Cuba Company Railroad runs one-half mile north. Sidings are at depot, one-half mile northeast. There are probably 600 yards of siding all told. The depot is a wooden building, 30 by 150 feet. Very little platform space for handling supplies, but there is ample open ground for entraining or detraining. There is a cattle chute which could be used for loading or unloading stock.

Roads lead out of town as follows: North to Puerto Padre and Manatí; east to Holguín; south to Bayamo; and west and southwest to points of less importance.

If the hills above referred to were occupied by the defense, the best line of attack would be from the north and northwest. However, the country in this direction is open and nearly level, thus offering little cover. From the west or southwest the Las Tunas River would form a formidable obstacle for cavalry or artillery, but not for infantry. A stone bridge over this stream, built during the first American intervention, leads into the town from the southwest and is the only bridge over the stream.

MANZANILLO TOWNSHIP



Vedado.—Barrio and village. The settlement is situated 15 miles southeast of Puerto Padre on the Holguín-Puerto Padre road and on a small stream. Consists of 8 or 10 native houses. Water from wells.

Yarey.—Barrio and village. Village is situated on a small creek of the same name, 11 miles southwest of Puerto Padre, with which it is connected by wagon road via Maniabón; consists of 15 or 20 houses.

Yaya.—Barrio and village. The village is 15 miles southeast of Puerto Padre on Chaparra-Velasco wagon road; consists of about 15 houses.

JUDICIAL DISTRICT OF MANZANILLO.

Township:	Population.
Manzanillo	54,900

TOWNSHIP OF MANZANILLO (CAPITAL, MANZANILLO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Manzanillo	Primero	Urban		2,269
	Segundo	do		2,272
	Tercero	do		2,689
	Cuarto	do		3,314
	Quinto	do		1,436
	Sexto	do		3,839
Calicito La Ceiba. Cuatro Esquinas. Los Letreros. Troya. Valerino.	Calicito-Congo	Rural	10	3,083
Campechuela Ceiba Hueca. Las Muchachas. San Francisco. San Ramón. Tana.	Campechuela	do	18	8,095
Ingenio Esperanza Blanquizal. El Caño. Palmas Altas.	Ingenio Esperanza	do	4	5,965
Jibacoa Orillas. Palmarito. La Piedra. Pozón. Los Puercos. Purial.	Jibacoa	do	12	2,406
Media Luna Los Guayos. Vicana.	Media Luna-Vicana	do	36.5	5,859
Niquero Cabo Cruz. Cuchillo. Sevilla Abajo. Velic.	Niquero	do	52	6,387
Pilón Ensenada de Mora. Portillo. Ramón Portillo.	Pilón	do	36	2,690
Yara Zarzal.	Yara-Zarzal	do	13	4,596

Manzanillo.—Town. Situated on Manzanillo Bay, latitude 20° 19′ north, longitude 77° 16′ west. Built on flat ground at the foot of a low range of hills which runs along the coast in a northwesterly direction for about 9 miles. Streets are straight and run at right angles, averaging about 40 feet in width and forming blocks of 4 lots each; in very poor condition. It is divided into six wards or barrios. Houses are built of brick, covered over with a sort of plaster; some frame houses. The usual native shacks are found on the outskirts. There are several modern, fireproof, cement, two-story buildings. The plaza is centrally situated; is known as Céspedes Park and covers about 4 acres.

This town ranks sixth on the island in the value of its exports and imports. It exports sugar, tobacco, wood, and honey and imports foodstuffs, building material, and, in fact, nearly all the commodities of life.

It supports an ice plant, 10 cafés, 8 hotels (very small), a brickyard, 2 sawmills (one of them very small), 4 leather shops, 2 tanneries, 8 bakeries (many grocery stores have small bakeries in connection), 8 blacksmith shops, 8 foundries, 2 machine shops, 4 large hardware stores, and a market, which is a quadrangular building covering nearly one city block.

The whole business transacted is practically in the hands of five large business concerns. These firms own warehouses, wharves, tugs, and nearly all transportation by means of which trade is carried on with interior points and points along the coast of this district.

The population is 15,819.

Water supply: There is no water system, the supply being obtained from wells and cisterns and from the Yara River. The water from these wells and cisterns, on account of their shallow depth, the proximity of cesspools, and the nature of the ground, is unfit for drinking purposes and in many places unfit for any use. A great many of the houses are supplied with large tanks in which rain water is caught and stored during the rainy season; therefore during the dry season, and to a great extent during the rainy season, the city is dependent upon the supply obtained from the Yara River, which is controlled by one individual. One mile and a half northeast of town, on the Yara River, there is a small pumping station, from which the water is pumped to the outskirts of town through a 2-inch pipe and stored in large tanks. It is then drawn off into jars and peddled through the town in carts. A project is being considered for the construction of a modern water-supply system.

Sewerage: There is no sewer system. All houses are supplied with cesspools and in only a very few instances are modern water-closets installed. These cesspools are invariably allowed to fill up and are in a frightful state at all times. This condition is worse on the outskirts of the town among the poorer classes. Here the cesspools are only shallow trenches and when full a light covering of earth is thrown over them and a new trench is dug. There is a block of buildings under construction near the sea in which a modern system of sewers will be installed, but for the buildings of this block only.

Lighting: The city is lighted by electricity. The plaza and the streets adjoining it are lighted by arc lamps on street corners and the remainder of the streets by 32 candle-power incandescent lamps. The electric-light plant is situated at the corner of Joaquín Oro street and Camino de la Caimanera.

Barracks: Besides the warehouses on the water front, which are described below as quartermaster and commissary storehouses, and the two old forts described as fortifications, there are two buildings which could be converted into barracks to accommodate 250 men. They are situated and described as follows:

Building used by United States troops during first intervention; at foot of Concepción street, between Marina street and sea. Frame building 200 feet long, 44 feet wide. Constructed by Spaniards for barracks and now used for school. Covered porch on the two long sides. Built 2 feet from the ground; board floors. At present partitioned into rooms 42 feet by 45 feet. Well lighted; windows large and 3 feet from floor. Tile roof; 17 feet from floor to eaves. In good repair and sanitary condition. Well lighted and ventilated water-closets over sea. Open lots on both sides along Marina street, 75 feet from building. No water fit for drinking purposes. One large well near building. Capacity, 150 men.

Building at the head of Batería street on hill overlooking the city. Frame building 130 feet long, 35 feet wide. Originally used as a civil hospital. Partitioned into 6 rooms. Height off ground, 2 feet. Ten windows in long side; 2 windows and door in front and rear. Corrugated sheet-iron roof. Condition of repair poor; sanitary condition good. Situated on hill; well lighted and ventilated. One water-closet in building emptying into cesspool. No water in immediate vicinity. Capacity, 100 men.

No stables in the town. Individuals who have horses generally keep them in sheds built in their yards.

There are no transportation corrals. Most suitable sites for same are on the outskirts of the town, one northeast and the other southeast. Water for former could be obtained from the pipe from the Yara River and for latter by boring well 15 to 30 feet deep.

Hospitals: There are two—the Civil Hospital and Hospital Colonia Española. Aggregate capacity, 300 beds.

The Civil Hospital is on a hill south of town and on the Manzanillo-Jibacoa road. It consists of two buildings, one built of brick and the other frame. The brick building is 195 by 40 feet; tile roof. Three-quarters of the building is divided into eight rooms, six of which are private rooms containing 2 beds each; board floors. A corridor 8 feet wide runs the length of the building, and one crosses at center, 12 feet wide. The remainder of the building contains a room and a large ward on each side of the corridor. Building also contains the office, operating room, and dispensary, and is well ventilated and lighted. It is in good repair. The frame building has same dimensions as other; contains women's ward with capacity for 24 beds; partitioned into four rooms on one side, and has four cells for insane; in poor state of repair; used only in cases of necessity. There are 3 modern water-closets in brick building and 2 in the frame one. Cistern of rain water in center of court; capacity, 1,200 barrels. Kitchen and small dining room in a small building in rear. Capacity of the hospital in emergency, 300.

The Hospital Colonia Española was built and is maintained by the members of the Spanish Club of the town exclusively for their use. It is situated in southeast part of town and is 100 feet above sea level. It occupies the block bounded by San Francisco, San Nicolás and Joaquín Oro streets and faces northwest. It is a quadrangular brick building, 96 by 69 feet, with a porch 13 feet wide, an interior court and a flat, brick roof surrounded by a concrete railing. There are 13 rooms, besides the kitchen, operating room, and 2 bathrooms, all well ventilated and lighted. Condition of building is excellent. Capacity about 35 beds. Drinking water is obtained from a large cistern, which is supplied with rain water from roof; capacity, 10,000 gallons. Water for general use obtained from well 90 feet deep, which furnishes unlimited supply. Modern water-closets are installed, and the water from these and the baths empties into a large cesspool outside of building.

Quartermaster and commissary storehouses: There are 6 warehouses on the water front which could be used for storing large quantities of stores or for temporary quartering of troops. Their descriptions are as follows:

No. 1. Marina street, at foot of Maceo. Steel frame building; fireproof; corrugated iron roof; cement walls; board floors; divided into 2 large storerooms, with tramway from wharf running between. Front, 175 feet on Marina street; breadth, 45 feet. Tramway from wharf; one track running through building and another along end. Unloading platforms on Marina street; 175 feet long, 4 feet wide. Platform at one end, 5 by 45 feet. Good repair.

No. 2. Directly across street from No. 1. Brick, plastered over. Quadrangular, with small yard in center; tile roof; two stories; second story used as offices; board floors. One hundred feet on Marina street, 180 feet on Maceo street. Contains two large storerooms into each of which runs tramway connecting with all wharves along water front. In fair state of repair.

No. 3. On Marina street, between Maceo and Saco streets; takes up whole block. Brick, plastered over. Board floors; tile roof. Tramway along Marina street; unloading platform 15 feet wide. Good repair.

No. 4. Faces Marina street and includes the block, Marina, Saco, Sariol, and Comercio streets. Brick, plastered over. Quadrangular, small yard in center. Board floors; tile roof.

Tramway running into each of two large storerooms and connecting all wharves. In fair state of repair.

No. 5. At foot of San Pedro street. Fireproof; steel skeleton; corrugated sheet-iron roof and walls; board floor; one large storeroom. One hundred and forty-two feet on Marina street by 86 feet deep. Unloading platform northeast end of building; roofed; 86 by 32 feet. Tramway from wharf and running to all other wharves and warehouses. State of repair, good.

No. 6. On Marina street, corner of San Juan. New two-story brick building; plastered over; tile roof; cement floor; one large storeroom on ground floor; divided into compartments; second floor used as habitation. Seventy-eight feet on Marina street by 82 feet on San Juan street. Tramway from all wharves and other warehouses; unloading platform on Marina street, 15 by 78 feet. In good state of repair.

Important offices situated as follows: City hall, containing police headquarters and municipal court, Parque de Céspedes; post-office and telegraph office, in one building, Macéo street, corner of Santa Ana; cable office, Saco street, between Merchante and Santa Ana; telephone central, Inglesia street, between Masó and Pedro Figueredo; custom-house and steamship office, in one building, Marina street, corner Macéo, second floor.

The ice machine is on Adelaide street between the Camino de la Caimanera and Sustegin street.

In the immediate vicinity of the town there are three camp sites to be considered. (1) South of town on hills, one-fourth of a mile distant. Excellent sanitary features; suitable for two battalions; no water at present, but water can be struck 30 to 50 feet from surface; no wood. (2) Southwest of town at foot of hills; level plain 2,000 yards long by 800 wide, facing the sea; good camp site in dry season; no water at present; could be struck at about 15 feet below surface, but not fit for drinking unless boiled or sterilized; no wood; good grazing in hills back of site. (3) Just beyond town and to the east, at foot of hills; a site suitable for two companies. Sanitary features, fair; no water at present, but can be struck by boring 15 to 90 feet; no wood; grazing in hills. In addition to these, excellent sites may be found south of the town, from 1 to 6 miles distant, suitable for from one company to eight companies, but water is scarce.

Fortifications: Two old forts, one on the southeast edge of town and the other on the water front, the descriptions of which are as follows:

No. 1. At the head of Masó street, overlooking the city; 80 feet above sea level; 100 feet wide by 150 feet long; two prominent salients facing city. Wall entirely surrounding, ranging in thickness from 3 to 5 feet, excepting front, where the wall is 10 feet thick. In rear the wall is loopholed. Entirely surrounded by moat ranging in depth from 10 to 15 feet and 7 feet wide. The building is constructed of limestone and brick. Of no practical use as a fort; commanded by hills east and west. This fort incloses a brick building, quadrangular in form, 100 by 84 feet; used as rural guard barracks. Two rooms, 22 by 36 feet, and twelve smaller ones. Building is in fair repair; sanitary condition fair. Water supply obtained from well outside of wall; pumped to barracks by windmill and stored in tanks; quantity, unlimited; quality, fair. Capacity of buildings, 75. Water-closets empty into cesspool outside of wall.

No. 2. Foot of Batería street, between Marina street and sea; 100 by 120 feet; entirely surrounded by brick wall, except side facing sea, which consists of two walls filled in with earth. Brick walls on other three sides; 2 feet thick, 8 feet high, loopholed every 2 feet. Two prominent salients face the town. A moat 10 feet wide and ranging from 5 to 10 feet in depth entirely surrounds this fort, except on the sea side. It incloses two frame buildings. The smaller and larger together are 90 feet long, 51 feet wide, and 15 feet high. The large building has a corrugated iron roof, the smaller one a tile roof. Divided into three rooms; good ventilation by means of double doors and 10 windows. In poor repair; sanitary condition good. Water supply for drinking purposes carried in carts from other end of town, where it is pumped from Yara River; for bathing and washing purposes obtained from well underneath building; supply from this source unlimited. Capacity of building, 75. Within the walled inclosure there are two brick buildings; the larger, 14 by 15 by 12 feet, one story high, one room, tile roof; the smaller, 9 by 14 by 18 feet, tile roof. Outside of wall inclosure there is a kitchen building, one story, frame, 12 by 34 feet, wood roof covered with tar paper. Bath house, 6 by 6 by 10 feet; two showers.

Roads leading out of town: East, Camino Real to Caño, Blanquízal, Veguita, Barrancas, Bayamo, and other interior points; south, Manzanillo-Ceiba road to Ceiba, Las Cuatro Esquinas, San Francisco, and other points south of town; southeast, Manzanillo-Jibacoa road to Jibacoa; southwest, coast road to Tranquilidad, Salvador, Calicito, Campechuela, Ceiba Hueca, San Ramón, Media Luna, and Niquero.

The hardest points to defend would be the south and southeast portions of the town.

Calicito-Congo.—Barrio. This barrio lies southwest of the city of Manzanillo.

The two sugar mills, Tranquilidad and Salvador, situated, respectively, on the northern and southern boundary of the barrio, furnish employment for practically the whole male population during the cane season. The manufacture of sugar is practically the only industry of the barrio, and during the months in which the mills are not in operation little work goes on except on small farms scattered about the barrio.

The most important settlements are Calicito, La Ceiba, Cuatro Esquinas, Los Letreros, Troya, and Valerino.

Calicito.—Village. About 10 miles by road southwest of Manzanillo, 3 miles south of central Salvador on the coast, and about 500 yards from the Jibacoa and Gua rivers. Four small stores. Houses are all huts with no floors. About 300 people. Telephone to Manzanillo; no telegraph.

La Ceiba.—Small settlement situated 4½ miles south of Manzanillo on the Manzanillo-Ceiba road; 20 houses, 5 of which are frame with tile roofs; remainder native. Two stores at the center of village and a school. Center of village at a crossroads where there are 11 houses, 4 of which are frame. Water from wells.

Cuatro Esquinas.—Village. About 6 miles south of Manzanillo on the Manzanillo-Cuatro Esquinas road at the point of the intersection of the Calicito-Cuatro Esquinas road. One store at the intersection of the roads and about 10 scattered houses. Population, about 70. Water from wells.

Los Letreros.—Village. Small settlement, central point of which lies 1½ miles west of Cuatro Esquinas on the road to Calicito. Twenty-five native houses; 1 store, frame, with tile roof; 1 school. Population, about 200. Water from wells.

Troya.—Village. Near the Salvador sugar mill, 8 miles southwest of Manzanillo. It is made up almost entirely of palm huts. Two principal streets parallel to the coast. Three stores built of wood; one is about 70 feet long, and could be used as barracks. Inhabitants are mostly negroes—cane cutters and other employees of the Salvador mill. Water supply obtained from well at mill. Camp site near for large force. Wharf about 300 feet long and reaching 13 feet of water.

Valerino.—Village. Situated 2 miles southwest of Manzanillo on road to central Salvador. It consists of about 50 houses in vicinity of Tranquilidad sugar mill; homes of the laborers. There is a store at the mill and a bakery. Water for drinking is obtained from tanks of rain water at mill. There is also a well with steam pump, but the water tastes of salt. Camp site near for large force. There is a wharf 300 feet long reaching 11 feet of water at low tide; a large storehouse is near it. Track runs from storehouse to wharf.

Campechuela.—Barrio and town. Besides the town the barrio contains the sugar mills Teresa, San Ramón, and Dos Amigos and the villages Ceiba Hueca, San Francisco, Las Muchachas, San Ramón, and Tana.

The town is 18 miles by road southwest of Manzanillo, on the coast. It is the largest town south of Manzanillo; 3,933 inhabitants. Twelve streets parallel to coast, and 11 at right angles to these. Five schools; 10 stores, 3 of which are quite large and sell general merchandise; a restaurant; and a store at the Dos Amigos mill at edge of town. The houses are all one-story; a few built of masonry with tile roofs, but most of them built of palm. Location is not healthful, as it is too low and the drainage is bad. Water supply obtained from tanks of rain water. There is a well with steam pump at sugar mill, but water is not good for drinking. Telephone to Manzanillo and other points; no telegraph. Camp site for large force on high ground back of town.

Two wharves, about 200 yards long, reaching 11 feet of water at low tide. Each has single-track tramway running onto it. One is the property of central Dos Amigos; the other is connected by its tramway with a small storehouse near by. Wagon roads northeast to Manzanillo, southeast to Ojo de Auga, and southwest to San Ramón.

Ceiba Hueca.—Town. About 20¾ miles by road southwest of Manzanillo and 2¾ miles from Campechuela, on the coast. Near it is the central Teresa, in which most of the inhabitants of the town are employed. Town has about 450 houses, some frame and the remainder thatched palm; one school, 10 stores, and a large restaurant, which is property of the mill. Population, about 1,000. Water obtained from wells and cisterns. Telephone to Manzanillo and surrounding sugar mills; no telegraph. Wagon roads to San Ramón, Campechuela, and Ceiba Hueca Arriba.

Las Muchachas.—Village. A small settlement situated 7 miles by cart road southwest of San Ramón, 1¼ miles east of Tana (terminus of narrow-gauge railroad from San Ramón) and on the Río Jo. It is connected by wagon road with Media Luna and with Manzanillo via Calicito. There are 2 general stores. Water from the river. Camp site near for battalion.

San Francisco.—Village. A settlement of about 25 native houses on the coast, 21¾ miles by road southwest of Manzanillo and 1 mile from Ceiba Hueca. Population estimated at 100. One school and a small store.

San Ramón.—Village. On the coast, 23½ miles by road southwest of Manzanillo and 5½ miles from Campechuela; near San Ramón sugar mill. Consists of about 100 small houses. Six stores. Water from well, raised by steam pump for the mill. Rain water for drinking purposes can be obtained at mill. Inhabitants are all employed in mill or on its colonias. Telephone to Manzanillo and other points; no telegraph. Camp site in vicinity for large force. Wharf, property of mill, about 140 yards long; reaches 19 feet of water at high tide; single-track tramway to mill.

Tana.—Village. A small settlement on a colonia 10 miles southeast of San Ramón. Twenty native houses and a small store. Water from well and the Tana River. Cane railroad to Ceiba Hueca and to wharf at San Ramón; 36-inch gauge. Telephone to Ceiba Hueca and San Ramón. Camp site for a battalion, 1¼ miles northeast. Wagon road to Media Luna.

Ingenio Esperanza.—Barrio and sitio. Besides the sitio bearing its name, the barrio contains the villages of Blanquízal, El Caño, and Palmas Altas. The sitio is 4 miles by road northeast of Manzanillo. Consists of the ruins of a mill, destroyed many years ago, and two huts.

Blanquízal.—Village. A small settlement 3 miles east of Manzanillo on the calzada and a narrow-gauge cane railroad to Palmas Altas. Water supply from cisterns and a branch of the Yara River.

El Caño.—Village. A small settlement situated on the calzada 3 miles northeast of Manzanillo. Water from Yara River; some rain water in cisterns. Camp site in vicinity for one company.

Palmas Altas.—Village. A small settlement on the calzada leading southeast from Manzanillo; 4½ miles distant and at end of a narrow-gauge railroad from the same town. Water from branch of Yara River.

Jibacoa.—Barrio and town. The barrio includes points known as Orillas, Palmarito, La Piedra, Pozón, Los Puercos, and Purial. That which is referred to as the town of Jibacoa is made up of the three scattered districts Palmarito, Pozón, and Los Puercos, which are described separately, and its center is about the center of the barrio; about 12 miles southeast of Manzanillo. All of the names of points in this barrio are applied to districts containing houses which are very much scattered. The distances given are estimated to the largest group of houses covered by the name. Rain water constitutes the principal water supply of the barrio.

Purial.—Village. Situated 6½ miles south of center of barrio and on the Jibacoa River. Population estimated at 400. Central settlement consists of 3 stores and 14 native huts.

La Piedra.—Village. Situated 4½ miles south of west of center of barrio. Population estimated at 150. One store, 2 schoolhouses (one in use), and many small scattered native huts.

Palmarito.—Village. Situated 1 mile south of center of barrio on road to Purial. Population estimated at 200. Two stores and 8 small, native huts on road; other huts back from road.

Pozón.—Sitio. Situated 1½ miles west of center of barrio. Population, permanent, estimated at 50. Dairy, 2 large ranch houses, a small store, and 2 small, native huts. Water obtained from wells.

Orillas.—Sitio. Situated on north bank of Jibacoa River directly across from Jibacoa. District consists of 7 farms, all of which are named. Was originally the town of Jibacoa. In 1878 and 1898 was a camp for Spanish volunteers numbering from 200 to 1,000 men.

Los Puercos.—Village. Situated one-half mile from center of barrio. Population estimated at 150. Scattered native huts.

Media Luna-Vicana.—Barrio. Southwest of Manzanillo. Contains the town of Media Luna, the villages of Los Guayos and Vicana, and the Isabel sugar mill.

Media Luna.—Town. Situated southwest of Manzanillo; 36½ miles distant by road; near the coast and on the Vicana River. It is made up of three small settlements that were formerly known as El Carmen, Pueblo Nuevo, and Pueblo Viejo; laid out in parallel streets and contains about 800 houses. Some of these houses are built of brick, plastered over, and have tile roofs, some of wood with thatched roofs, and the remainder are thatched huts. There is one two-story building, property of the owners of the Isabel sugar mill, which contains a large store and restaurant, and there are 10 other stores, a school, and a brickyard. Population, about 3,500, which varies. The central Isabel, with its principal buildings, is east of the town and on the opposite side of the river. Water supply is obtained from river. Telephone connection with all mills along the coast; no telegraph. Camp site in vicinity for regiment. Wharf on coast for central Isabel; 165 yards long; 14 feet of water; connected with town and surrounding cane fields by 36-inch, single-track railroad. A small steamer arrives daily from Manzanillo.

Los Guayos.—Village. Situated at end of a narrow-gauge railroad, 2½ miles east of Media Luna. It is a colonia of the Isabel sugar mill, to which a great number of laborers are brought each year during the sugar season from other points in the island. About 50 houses; water from wells; telephone and cart road to Media Luna.

Vicana.—Village. About 2 miles by road from Media Luna, slightly east of south; near the Vicana River. Laid out in streets; about 100 houses, 2 stores, and a school. Telephone to Media Luna and other points; no telegraph.

Niquero.—Barrio and town. Besides the town, the barrio contains the Niquero sugar mill and the villages of Cabo Cruz, Cuchillo, Sevilla Abajo, and Velic.

The town is on Niquero Bay, southwest of Manzanillo; about 52 miles distant by road. About 250 one-story native houses, 6 general stores, and a small drug store. Population, 1,584. The central Niquero is on the east side of the town. Most of the inhabitants are employed in the mill during the sugar season. Rains furnish water supply, but there is a good well at mill and a large iron tank to which water is raised by a steam pump. Streets are impassable in wet weather, and sanitary conditions are bad. Telephone connection with all sugar mills along the coast and with Manzanillo. No telegraph. Camp site in vicinity for battalion. Two wharves; one about 200 yards long, in good condition, reaches 12 feet of water at high tide; the other, about 50 yards long, in bad condition, reaches 8 feet of water at high tide. Single-track tramway runs from each wharf to the sugar mill.

Cabo Cruz.—Village. At extreme southwest point of Oriente Province, near Cabo Cruz light, and 24 miles by trail southeast of Niquero. Consists of 20 huts, a store, and a schoolhouse. People are engaged in turtle fishing. Water from wells.

Cuchillo.—Village. About 8 miles by road northeast of Niquero; 25 palm huts, a school, and a store. Water from Manaca River.

Sevilla Abajo.—Village. Situated 4½ miles by trail northeast of Niquero; 25 palm houses, a store, and a school. Water from Sevilla River.

Velic.—Village. Situated southeast of Niquero; 9 miles distant by trail. Laid out in streets; 35 houses, 3 small stores, and a school. Water from cisterns and wells. Telephone to Niquero; no telegraph. People engaged in turtle fishing. Was destroyed by fire in 1893, at which time it was a much larger village.

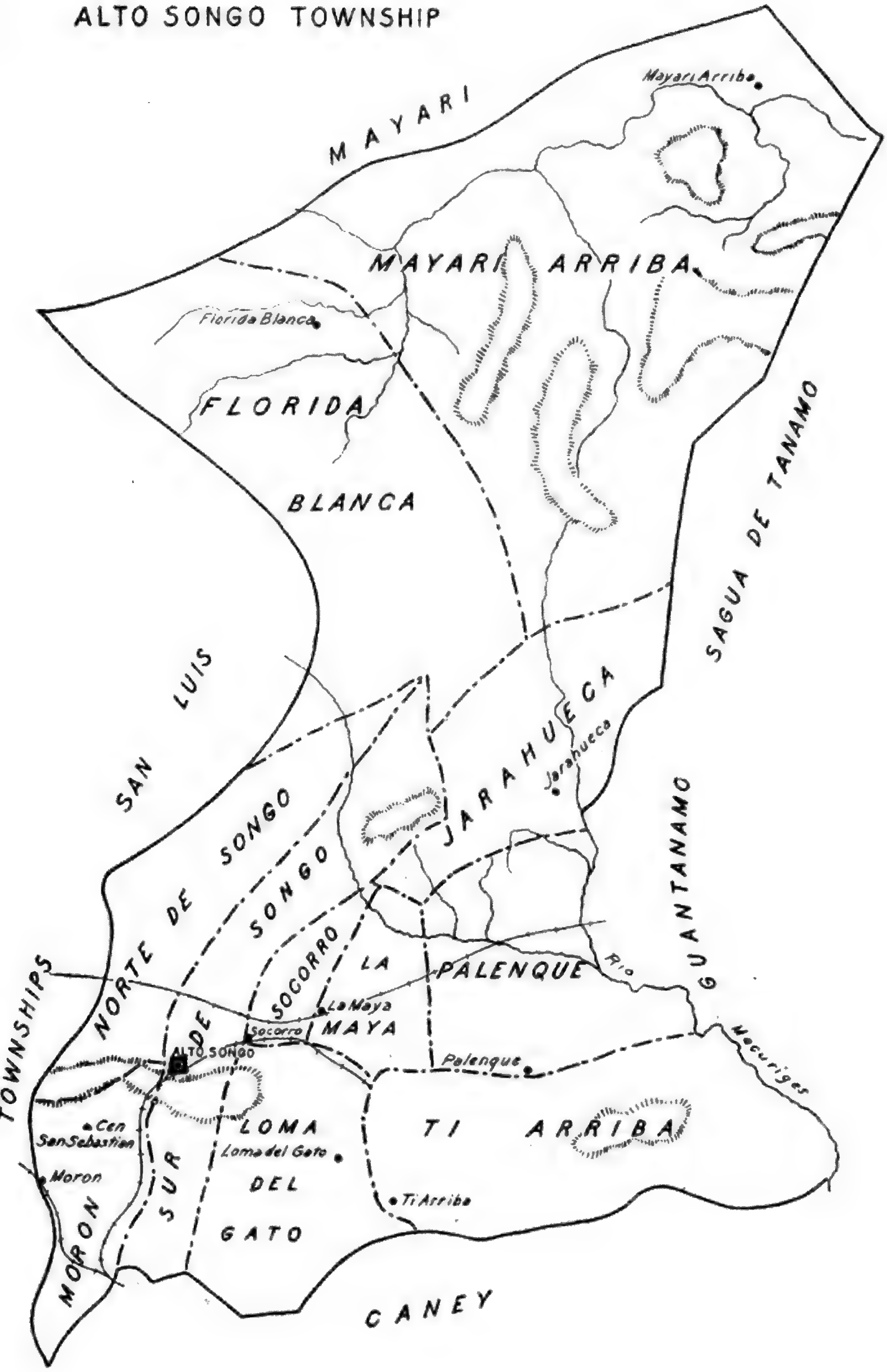
Pilón.—Barrio and village. Barrio contains, besides the village bearing its name, the central Cabo Cruz and the villages of Ensenada de Mora, Portillo, and Ramón Portillo. The sitio is situated at the base of a mountain, and is about 36 miles by road and trail southwest of Manzanillo; 12 houses and a store. Water from a stream. The name "Pilón" is frequently applied to the Cabo Cruz mill and also to the village of Ensenada de Mora.

Ensenada de Mora.—Village. Situated on south coast, about 40 miles by road and trail southwest of Manzanillo, which is its port of entry. It is made up of the Cabo Cruz sugar mill, with its buildings and employees. The permanent population is about 500, which is increased to 1,800 or more during the grinding season. Water is piped from near-by mountain streams; quality excellent, and quantity unlimited. Five thousand troops could be quartered in emergency. Camp site for large force; water piped from dam near site; good grazing. Wharf, 30 by 1,200 feet; 22 feet of water; traversed by double track. Port is visited by steamers of the Trujillo Steamship Line. Wagon road east to Portillo and trail west along the coast.

Portillo.—Village. On the south coast, 11 miles by road east of Cabo Cruz sugar mill, at Ensenada de Mora. A small place owned by an American, who started a lumber camp and later bought machinery and took some steps to build a sugar mill; finally abandoned both projects.

One two-story building intended for hotel; 16 rooms, mess hall, large kitchen with range, and a woodhouse; new and in excellent condition; capacity 120 men. A one-story building in rear of the hotel is suitable for barracks for 80 men. Besides these buildings there is a general store, a small storehouse near the wharf (15 by 20 by 10 feet), a stable for about 12 animals, and about 12 native huts. Water obtained from two wells about 12 feet deep; quality doubtful. Good supply could be obtained from river, 3 miles distant. Remains of an old fort on west of entrance to bay. A small wharf reaching 20 feet of water. No telephone or telegraph. Trail north to Media Luna and San Ramón; one east along coast which leads north at Río Macio to Manzanillo; road west along coast to central Cabo Cruz. Steamers of the Trujillo

ALTO SONGO TOWNSHIP



Steamship Line touch here. Smuggling point for arms and ammunition during war with Spain.

Ramón Portillo.—Sitio. A small settlement situated in the mountains 8½ miles by trail and road northeast of central Cabo Cruz. Small camp site near.

Yara-Zarzal.—Barrio and villages. The village of Yara is situated 13 miles by road southeast of Manzanillo near the Yara River. Population, about 300. Water supply obtained from the river. Road to ingenio Sofía. The village of Zarzal is about 5 miles south of Yara on same road from Manzanillo.

JUDICIAL DISTRICT OF SANTIAGO DE CUBA.

Township:	Population.
Alto Songo	20,553
Caney	16,215
Cobre	14,715
Palma Soriano	20,235
San Luis	14,212
Santiago de Cuba	53,614

TOWNSHIP OF ALTO SONGO (CAPITAL, ALTO SONGO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Alto Songo	Norte de Songo	Rural and urban.		1,948
	Sur de Songo	do		1,733
Florida Blanca	Florida Blanca	Rural	18	1,851
Jarahueca	Jarahueca	do	15	1,226
Carnelo.				
Jarahueca Abajo.				
Jarahueca Arriba.				
Limonada.				
La Lumbruis.				
Monteoscuro.				
Seboruco.				
Loma del Gato	Loma del Gato	do	3.7	1,055
Santa Ana.				
La Maya	Maya, La	do	3.5	3,072
Deseo.				
Sabanilla.				
Mayarí Arriba	Mayarí Arriba	do	30	1,464
Morón	Morón	do	5	1,086
El Palenque	Palenque, El	do	12	2,898
Cuatro Caminos.				
Jurisdicción.				
Socorro	Socorro	do	1.25	1,359
Tí-Arriba	Tí-Arriba	do	9.5	2,861
Yerba de Guinea.				

Alto Songo.—Town. The town is 15 miles from Santiago on the Sabanilla branch of the Cuba Company Railroad. Most of the town is in barrio Sur de Songo. Population, 1,310. About 200 houses, mostly one-story frame; some have tile roofs, some have corrugated iron or zinc roofs, others thatched roofs. Water supply from stream north of town, about three-fourths of a mile distant; quality, fair; quantity, abundant; slightly saline to the taste; delivered in carts and by pack animals. Post-office in center of town. Cuba Company Railroad has railroad station and telegraph office about one-half mile south. Telephone from rural guard quarters to Santiago. Town could quarter about one company. Most easily reached by the Cuba Company Railroad or the Santiago-Cristo pike to Cristo and the Guantánamo cart road from Cristo to Songo. The town is on the top of a prominent hill, and the surrounding country is devoted to raising of cacao, coffee, fruits, and live stock. Location healthful. On account of lack of water, town would be unsuitable for quartering a large number of troops. Best location for camp site is about three-fourths of a mile south of town on Platanilla River; water excellent and abundant.

Florida Blanca.—Barrio and sitio. The sitio is about 18 miles by trail north of Alto Songo; a finca with a couple of huts.

Jarahueca.—Barrio and sitio. Besides the sitio bearing its name the barrio contains Seboruco, Jarahueca Abajo, La Lumbruis, Carnelo, Monteoscuro, Jarahueca Arriba, and Limonada, all small settlements of from 1 to 15 or 20 huts, and scattered along the trail running south from Mayarí Arriba and connecting with the Santiago-Guantánamo road near the Macuriges River.

The sitio is situated about 15 miles, by road, northeast of Alto Songo, on the trail south from Mayarí Arriba, and on a stream of fairly good water. Sawmill and a coffee plantation. Camp site for a company. Water from spring; quality good, but slightly alkaline. Grazing good.

Loma del Gato.—Barrio and sitio. Barrio includes Santa Ana. The sitio is situated on the Cristo-Guantánamo trail 3¾ miles southeast of Alto Songo and 5¼ miles east of Cristo; a few scattered houses.

Santa Ana.—Sitio. A schoolhouse, situated 4½ miles southeast of Alto Songo.

La Maya.—Barrio and town. Besides the town the barrio contains Deseo and Sabanilla. The town is about 18½ miles northeast of Santiago, being the eastern terminus of the Sabanilla branch of the Cuba Company Railroad. Population, about 1,000. About 300 houses, mostly one-story frame buildings with zinc and corrugated-iron roofs. Water supply from small stream about 2 miles south of the town; brought to town on pack animals; quality fair, quantity limited. Pump and water works soon to be installed. Town would accommodate about one company of troops; not suitable for troops at present on account of the scarcity of water. Nearest good camp site is about 2 miles southeast on the Ti-Abajo River; sufficient ground for one regiment. Post-office and railroad telegraph office. There are about 500 yards of railroad siding. A standard-gauge track, which connects here with the Cuba Company's branch, runs southeast to the Ponupo iron mines; length, 2 miles. Most easily reached by railroad and by wagon road via Cristo from Santiago. The Camino Real de Guantánamo, which leaves the town to the northeast, has a branch running to the southeast through Cuatro Caminos and Yerba de Guinea; both roads permit cart transportation the greater portion of the year. The Cuba Eastern Railroad passes within 1 mile of the town on the north side and will have a station near this point. The town is situated on top of a prominent hill, making it necessary to ascend in approaching from any direction. Location healthful. This place was practically destroyed by fire on April 1, 1909.

Deseo.—Sitio. A small group of houses on the Santiago-Guantánamo road about 4 miles from La Maya, slightly north of east.

Sabanilla.—Sitio. Situated 4 miles by road northeast of La Maya on cart road leading north from Santiago-Guantánamo road. A small settlement around the ruins of an old sugar mill.

Mayarí Arriba.—Barrio and sitio. The sitio is about 30 miles by trail northeast of Alto Songo on the Mayarí River. Consists of a store and 2 or 3 houses.

Morón.—Barrio and sitio. Central San Sebastián is situated in the barrio. The sitio is on the Cuba Company Railroad 5 miles southwest of Alto Songo; a few scattered houses.

El Palenque.—Barrio and sitio. Besides the sitio bearing its name the barrio contains Cuatro Caminos and Jurisdicción. The sitio consists of a small group of houses and is about 12 miles east of Alto Songo on a trail which branches northeast from the La Maya-Guantánamo road at Cuatro Caminos.

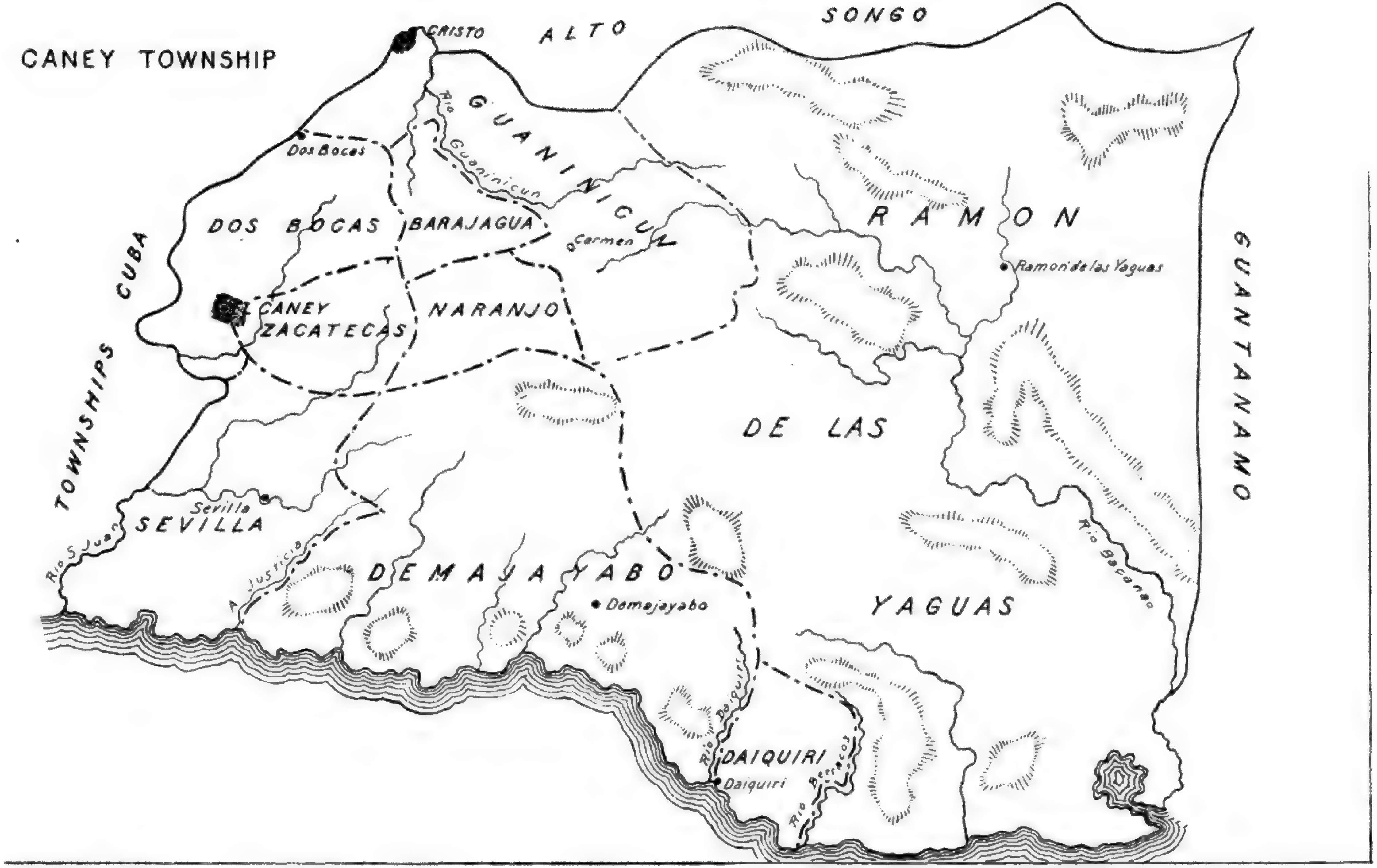
Cuatro Caminos.—Village. About 25 miles northeast of Santiago and 10 miles from Alto Songo on the southern trail to Guantánamo. Population, about 200. About 30 one-story frame houses. Water supply from a stream called La Taul, which passes through the village, but contains no water above the village except in rainy season. About 100 yards below the village is a good spring in the bed of the stream; flows the entire year and furnishes an abundant supply of good water; quality apparently excellent. Village could quarter about one platoon of troops. Country to the south mountainous; to the north and west rolling. Principal products coffee, cacao, and cattle. Locality healthful. No good camp site at village, but a good camp site for any number of troops exists between that point and La Maya.

Jurisdicción.—A small settlement on the Santiago-Guantánamo road about 12 miles slightly north of east of Alto Songo and 2 miles west of the Macuriges River.

Socorro.—Barrio and village. Village is about 19½ miles northeast of Santiago, on the Sabanilla branch of the Cuba Company Railroad. Population, about 150. About 40 houses, mostly shacks. Water from stream about one-fourth of a mile south; quality fair; quantity limited. Could quarter a platoon of troops. Railroad station on south edge of village. Most easily reached by railroad from Santiago or by road via Cristo and Songo. Village is on a ridge running east and west, which the Santiago-Guantánamo road follows. Locality healthful.

Ti-Arriba.—Barrio and village. Besides the village bearing its name, the barrio contains the settlement of Yerba de Guinea. The village is about 9.5 miles southeast of La Maya, near the west base of Loma de Cuchilla. Population, about 100. About 28 one-story frame houses. Water supply from stream in Ti-Arriba Pass near by; quality good; quantity abundant. Quarters for about two squads of troops. Post-office. No good camp sites in vicinity. Most easily reached from La Maya by cart road to Cuatro Caminos, thence by trail, or by trail via Ponupo. Trail to south through Ti-

CANEY TOWNSHIP



Arriba leads through pass into mountain region south. Surrounding country to the south mountainous; to the north broken.

Yerba de Guinea.—Village. About 33 miles northeast of Santiago and 16½ miles from Alto Songo on the southern trail to Guantánamo. Population, about 50. About 12 one-story frame houses. Water supply from Río Yerba de Guinea; quality fair; quantity abundant. Would accommodate a squad of troops. Surrounding country rough, but not mountainous, and containing numerous plantations of coffee and cacao and much grazing land. Locality healthful. Good camp site in vicinity for a regiment.

TOWNSHIP OF CANEY (CAPITAL, CANEY).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
El Caney	Caney	Urban		1,067
	Barajagua	Rural	5	327
El Cristo	Cristo	Urban	5	1,679
Daiquirí	Daiquirí	Rural	15.5	2,198
Vinent.				
Berraco.				
Demajayabo	Demajayabo	do	13	2,723
Firmeza.				
Siboney.				
Dos Bocas	Dos Bocas	do	4	2,189
San Vicente.				
El Carmen	Guaninicún	do	5	1,308
	Naranjo	do	5.2	315
Ramón de las Yaguas	Ramón de las Yaguas	do	20	3,137
Sevilla	Sevilla	do	4.5	576
	Zacatecas	do	2.1	696

El Caney.—Barrio and town. The town is 5 miles by road northeast of Santiago de Cuba on one of the foothills of the Sierra Maestra and overlooking the valley surrounding Santiago de Cuba Bay. It contains about 300 buildings, practically all of them being one-story frame structures. About one-half of the more important ones have tile roofs, the other half having zinc or corrugated-iron roofs. The only business carried on is the sale of general merchandise to the inhabitants of the town and surrounding country. In the hills to the north coffee and cacao are the principal products, while in the valley to the south the country is principally in pasture.

Population, 1,067.

Water supply is taken from El Caney River or Creek, which flows through the east side of the town. Distributed by carts or carried by hand from the river. Quality of water excellent, if taken from river above town. Quantity sufficient to supply needs of a regiment. Stream comes from the mountains and flows the entire year. Water was taken from this stream, above the town, for use of the American troops during the first occupation of the island. The pumping station they had in use has since been carried away by flood.

There is no sewer system. Town lighted by oil.

There are no barracks. On east side of street nearest the river and near the ford across the river is a one-story frame house with tile roof, in good condition; would accommodate about 20 men. Occupied by detachment of rural guard; water carried from river; no modern closets; sanitation fair. No other buildings suitable for use as barracks except small private houses, which would accommodate one battalion.

There are no stables and no transportation corrals. Best ground for corrals is in pasture land just south of town on both sides of the macadamized road. Animals could be watered at the stream.

The only buildings suitable for use as hospitals are private buildings. The one most suitable is on the south side of the plaza and is equipped with private water system; capacity about 25 beds; location healthful.

No buildings suitable for quartermaster or commissary storehouses except private residences or stores, of which there are enough to answer any possible needs if seized or rented.

There is no railroad to this town. Post-office and telegraph office in the same building on Cuba street, opposite the northwest corner of the plaza. Government telephone from rural guard quarters to Santiago.

On both east and west sides of town is open ground sufficient for a regimental camp. Good drainage; water, grass, and fuel convenient; location healthful. Hills would prevent camps being laid out with any regularity. In dry weather troops could camp at almost any point along the road from El Caney to Santiago.

There are no defenses.

Principal road is a macadamized road leading to Santiago which leaves the town at the south end of Cuba street. A trail leaves the town from the east side, crosses El Caney Creek about halfway between the north and south ends of town, and, continuing in a general northeasterly direction, passes over the Sierra Maestra Mountains to Ramón de las Yaguas. Another trail leaves the town to the west, at a point about midway between the north and south ends of town, and strikes the Santiago-Cristo road at Cubitas.

Town would be most difficult to defend against an enemy advancing from the west. It could be most easily approached along the Santiago-Caney highway but this would be dangerous, because the road for the greater part of the distance is commanded by the hills on which the town is situated. The town would be untenable if the attacking force could secure the hills to the north of town. An advance from the west would enable the attacking force to advance, for the most part, under cover, with their lines extended parallel to the ridges and ravines, and would furnish positions equal in strength to those in and about the town.

Barajagua.—Barrio. Contains no settlement.

Cristo.—Barrio and town. The town is 10 miles from Santiago, slightly east of north, on the Cuba Company Railroad. Population about 1,316. About 100 one-story frame houses and as many more native huts. Water supply from the Guaninicún River; quality excellent; quantity abundant. The drinking water is taken from concrete wells sunk in the bed of the river, through which the water filters. Post-office; railroad telegraph office; telephone in rural guard barracks to Santiago; and railroad water tank. Most easily reached by Cuba Company Railroad from Santiago and by pike from Santiago and San Luis. Town is situated at the north end of the Cristo pass, the country to the north spreading out into the valley of the Guaninicún and Cauto rivers. Immediately to the south is the Sierra Maestra Mountain range which is lower here than at any other point between Guantánamo Bay and Cape Cruz. The products are cane, coffee, cacao, fruits, and cattle. Locality healthful. Good camp sites in immediate vicinity for one regiment. A lumber shed, 60 by 100 feet, just east of where the railroad crosses the main street, is large enough to shelter one company. On main street just north of railroad crossing is a

Baptist church and schoolhouse which could quarter one-half of a company. Catholic church on main street, about center of town, would quarter about one platoon. Baptist college, a two-story stone building fitted with private water system, is near the north edge of town; would accommodate one company or would be suitable for a hospital. The railroad depot could quarter one company. The Cuba Company R. R. has two parallel sidings, each 250 yards long, on east side of station, and two tracks of 100 yards each, forming a Y toward the east. Good camp site for a regiment on north side of the Guaninicún River near ford. A quantity of lumber is usually kept on hand in the lumber shed.

Daiquirí.—Barrio and village. Besides the village bearing its name the barrio contains Vinent and Berraco. The village is on the coast 21 miles east of Santiago Bay. It is the shipping point for the Daiquirí iron mines, and the buildings belong to the Spanish-American Iron Company and are occupied by employees of that company. Population, about 150. About 20 one-story frame houses and the railroad shops of the Daiquirí Railroad. Water supply is received from the Magdalena River by gravity through 3-inch iron pipe; quality excellent; quantity sufficient for all needs. Could quarter 2 squads of troops. The company's hospital is on the railroad about 1 mile north. It is equipped with operating table, surgical instruments, well-stocked dispensary, running water and shower baths, and has space for 100 beds. No good camp sites near, but by small amount of labor a good site could be prepared at junction of standard and narrow gauge roads between the village and Vinent; wood, water, and grass in abundance. Most easily reached by boat from Santiago; Spanish-American Iron Company has a tugboat which makes the trip three times a week. Also reached by trail from Santiago. Carts with light loads can get over this trail in favorable season. Surrounding country extremely rough; almost no cultivation and very little stock. Locality fairly healthful. Telephone to Santiago. There is a wooden pier reaching to about 12 feet of water; track to the end of the pier.

Vinent.—Village. Situated 3 miles northeast of Daiquirí, and 15 miles in direct line southeast of El Caney. It is the headquarters of the Spanish-American Iron Company and the location of the most important of the Daiquirí iron mines. The buildings consist of offices, storehouses, and employees' quarters; all one-story, frame, in good condition, and most of them have corrugated iron roofs. Lighted with acetylene gas and oil. Water supply from same source as for Daiquirí; piped to all houses. Could shelter a regiment comfortably. Telephone connection with Santiago, Daiquirí, and Berraco. Connected by wagon road with Santiago, Siboney, and Berraco, and by railroad with Daiquirí and Berraco.

Berraco.—Village. About 6½ miles by road northeast of Daiquirí on Spanish-American Iron Company Railroad. It is a mining village, and all of the buildings are property of the company. There are office buildings and quarters sufficient to shelter 250 men. Water piped to all houses by gravity; quality good, but quantity limited; supply has to be augmented in dry season by supply brought from Daiquirí in tank cars. Telephone to Vinent, Daiquirí, and Santiago; wagon road to same points; connected by railroad with Daiquirí and Vinent.

Demajayabo.—Barrio and sitio. Besides the sitio the barrio contains Siboney and Firmeza. The sitio is on the wagon road running east, parallel with the coast, from Santiago to Surgidero de Baconao and near crossing of Río Demajayabo; 13 miles in direct line southeast of El Caney and 6 miles east of Siboney; one house.

Firmeza.—Village. On the railroad of the Juraguá Iron Mines Company, 13 miles in direct line southeast of Santiago and 12 miles by road and trail southeast of El Caney. The most important of the Juraguá iron mines are at this point. The buildings consist of quarters for heads of the departments and the laborers of the Juraguá iron mines. They are principally one-story frame buildings with corrugated iron roofs; all in good condition. Water obtained from the Benevolencia River, which would supply about 1,000 gallons per hour in dry season and 6,000 gallons per hour in wet season. Water is piped to all buildings by gravity. Quarters for about 600 men in emergency. Stables for about 14 horses. There is a hospital situated on high ground west of the railroad. It has 23 cots; is equipped with surgical instruments, operating room, dispensary, running water, and modern water-closets. Location is healthful, and good state of sanitation can be easily maintained in immediate vicinity. Post-office and telephone. No camp sites in vicinity and no defenses.

Siboney.—Village. Situated on the property of the Juraguá Iron Mines Company, 11 miles southeast of Santiago and 12 miles slightly east of south of El Caney. The population consists mostly of miners working for Juraguá Iron Mines Company. The buildings are one-story frame with corrugated iron roofs; all in good condition. Water is obtained from the Juraguá River and distributed by means of pipe line. The buildings would accommodate about 250 men in emergency. There are no good camp sites in vicinity and no defenses. Locality healthful. Has telephone connection with Spanish-American iron mines, Firmeza, and Santiago.

Dos Bocas.—Barrio and village. Barrio also contains San Vicente.

The village is 8 miles northeast of Santiago on the Cuba Company Railroad and 4 miles north of El Caney. Population, about 200. About 40 to 50 one-story frame houses. Water supply from a branch of the Río Purgatorio; quality, excellent; quantity, abundant. The stream flows through the edge of the village. Could accommodate about 3 platoons of troops. Post-office. Most easily reached by the Cuba Company Railroad or by the Santiago-Cristo pike, which passes through the village. Surrounding country hilly. Village lies in a narrow valley with hills rising to several hundred feet on all sides. Location healthful.

San Vicente.—Village. Situated 6½ miles north of Santiago on the Cuba Company Railroad and on the calzada to Cristo. Population, about 200. About 40 to 50 one-story frame houses. Water supply from branch of the Río Purgatorio, which flows through the edge of the village; quality, excellent; quantity, abundant. Could accommodate about one company. No good camp sites.

Guaninicún.—Barrio. Situated northeast of El Caney. Traversed by the Río Guaninicún. Contains but one settlement, a sitio named El Carmen. There are the ruins of an old mill, bearing same name as this barrio, to the west of the western boundary.

El Carmen.—Sitio. About 7 miles northeast of El Caney. Population, about 40. About 10 one-story frame houses.

Water supply from a branch of the Guaninicún River, about 150 yards distant; quality good; quantity abundant during the greater portion of the year. Would accommodate a squad of troops. Most easily reached from Santiago by trail via Caney, Escandel, and Villalón. Surrounding country is mountainous, the produce being coffee and cacao. Very little stock. Locality healthful. Good camp site for one company near sitio.

Naranjo.—Barrio. Name of barrio only. Contains no settlement.

Ramón de las Yaguas.—Barrio and village. Situated east of El Caney; 20 miles distant in direct line and about 25 miles by most direct trail; on the east bank of the Baconao River and at the southeast end of La Juba Mountain. Population, about 100; about 15 one-story frame houses, including 4 stores. Water supply from Baconao River; quality good; quantity abundant. A spring gushes from the side of the mountain about 6 feet above the general level of the trail, one-quarter of a mile distant up the east bank of the Baconao River, and would make a good water supply for a town of 8,000 population; quality excellent. Could quarter one squad of troops. May be reached from Santiago by several trails; the best way is to follow the macadamized road to Cristo, cart road from Cristo via Socorro, La Maya, Cuarto Caminos, Yerba de Guinea and trail from Yerba de Guinea through La Juba and Palmarita. Another trail leads via Caney, Escandel, Villalón, Mata Yagua, Carmen, Providencia, and Yaguas. Another trail via Daiquirí, Berraco, Chalia, Alta Gracia, and La Cristina. It may be reached from Guantánamo by trail via Limones, Iguanábana, Filipinas, and Casimba. Surrounding country extremely mountainous; cut up by mountain streams. Principal industry is cultivation of coffee and cacao. Not very many head of stock. Locality healthful. Camp site in immediate vicinity of village for one battalion. Post-office for this village is called Palmarita, and is distant 1 mile to the northeast.

This place is important on account of the great number of important trails that intersect.

Sevilla.—Barrio and sitio. The sitio is 6 miles east of Santiago and 4½ miles southeast of El Caney on the Santiago-

Daiquirí cart road; about 6 huts. A number of dairies in the vicinity.

Zacatecas.—Barrio. Contains no settlement.

TOWNSHIP OF COBRE (CAPITAL, COBRE).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Cobre	Central	Urban and rural.		2,140
Aserradero	Aserradero	Rural	18	964
Botija	Botija	do	2.5	533
	Brazo del Cauto	do	15.2	758
	Caimanes	do	6	1,243
Dos Palmas	Dos Palmas	do	12.5	919
	Ermitaño	do	3	367
Hongolosongo	Hongolosongo	do	5	1,878
	Manacas	do	16	2,738
	Nima-Nima	do	6	645
	Río Frío	do	5	1,270
	Santa Rita	do	10.5	1,260

Cobre.—Town. Situated in Central barrio 10 miles west of Santiago on the Cobre River. Town is on both sides of the Cobre River, which is a small stream flowing in a generally easterly direction through a narrow valley between two ranges of the Sierra Maestra Mountains and emptying into Santiago Bay at Punta de Sal. Mountains rise on both sides of the valley at Cobre to a height of 1,000 feet.

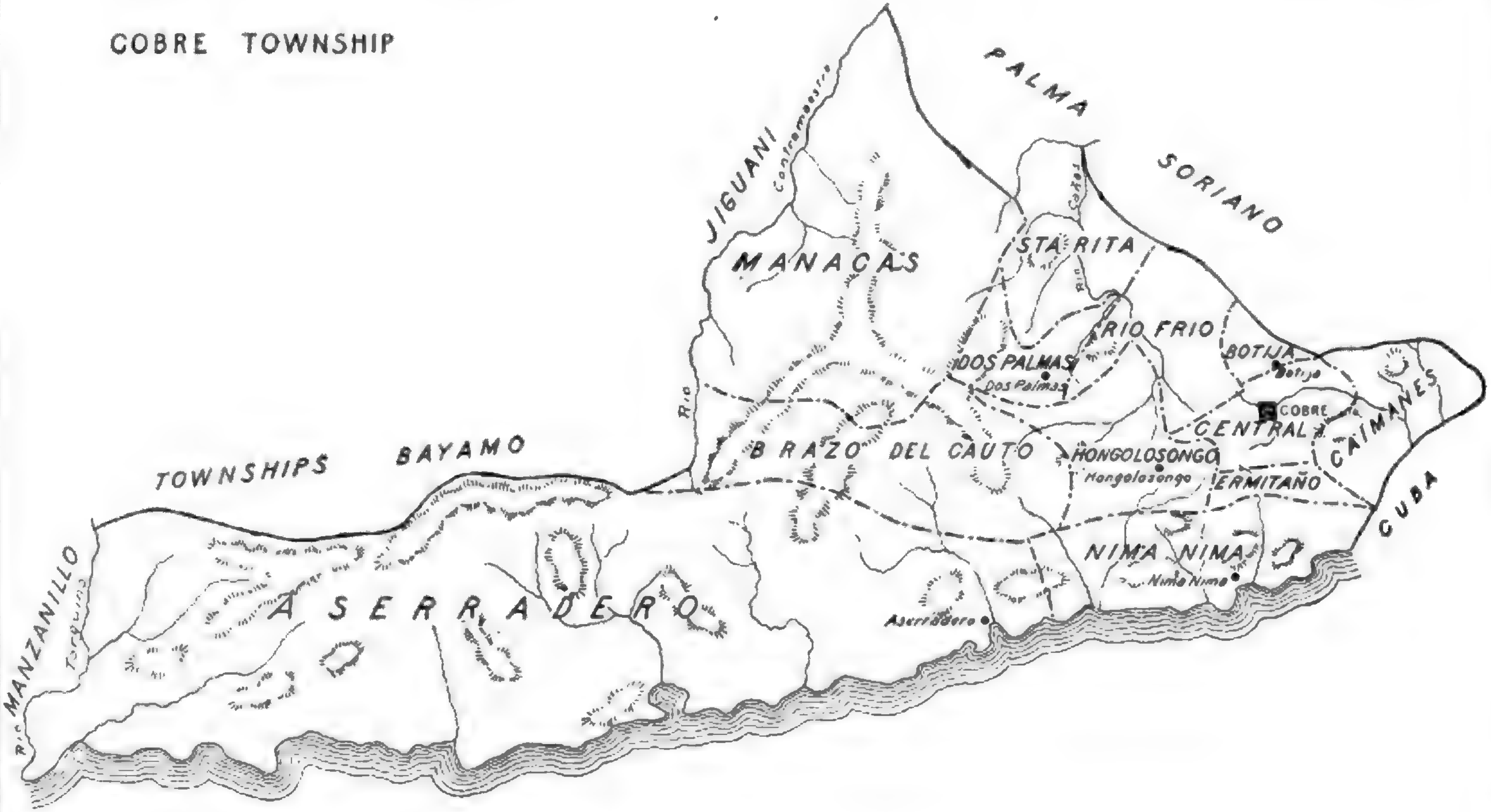
Heavy rains have frequently swollen the river so as to inundate the greater portion of the town. The town is lighted by petroleum and has one small plaza. Chief products of the vicinity are coffee, cacao, and cattle. The Cobre mines (copper) furnish employment for about 250 men. They have their own power plants, electric lights, foundry, and, in fact, a complete outfit for carrying on extensive mining operations.

Population, 1,781.

Water supply for the town comes from the wells, cisterns, and Cobre River. River water liable to pollution from residences in watershed above town. No sewer system.

The Cobre mines have a private water supply from a ravine on mountain side about one-half mile southwest of church; 4 to 5 gallons per minute; used only by employees of the company for drinking and household purposes; distributed throughout the mines by iron pipes varying in size.

COBRE TOWNSHIP



Quality of water excellent. Water for boilers and engines pumped from the Cobre River near plant.

No buildings in town intended expressly for military use.

On north side of plaza near bank of Cobre River is the city hall, a one-story brick building, about 80 by 80 feet, interior court; capacity about 125 men; water from cistern; no sewer; government phone to Santiago; condition of building excellent. Location undesirable, particularly during rainy season. This building and all others at the foot of the hill have been under water for a depth of almost 10 to 12 feet. About two years ago a great landslide from one of the mountains a few hundred yards below Cobre almost blocked the Cobre River; the gorge is still very narrow and in excessive rains would cause an overflow in the town. As further slides from the mountain might be expected in any rainy season, still further narrowing the outlet for the river, it would be unwise to use for military purposes any of the low ground in Cobre.

The convent is property of Catholic Church and used as residence for priests. It is on top of Cobre Hill, near ruins of the old church; frame buildings, one-story, 35 by 70 feet; no interior courts; capacity about 65 men; condition, good; water from neighboring cistern; water pipes from Cobre mines system within a few feet of the buildings; location healthful.

No stables of any size and no corrals, though open fields on north side of river could be used.

The Cobre Mines Company has a hospital; one-story building; about 30 by 15 feet; on hill south of church; capacity about 10 beds; location healthful; water from Cobre mines system.

No buildings suitable for storehouses for a command larger than a battalion. A number of private buildings could be rented for use as quartermaster and commissary storehouses; of sufficient capacity to cover all commissaries and quartermaster supplies except forage and transportation.

Railroad station is on the Cobre River just east of the mines and about 300 yards from the plaza; not easily accessible by teams.

Post-office is near the Plaza. Telephone office (government) in city hall; connects with government lines of Santiago. Private telephone in main office of headquarters of Cobre mines, which is on hill just east of church; connects various offices of the Cobre mines and also with the offices at Punta de Sal and Santiago.

There is no telegraph connection and no ice factory.

Private property northwest of town is available for camp site; consists of an extensive grass plot on rolling ground; apparently healthful; good drainage; water from Cobre River; grass in abundance and wood near at hand; capacity about one regiment. Temporary camp sites for small bodies of troops are numerous.

There are no defenses.

Cobre is connected with Punta de Sal, 8¼ miles distant on west shore of Santiago Bay, by the Cobre Mines Railroad. This road is narrow guage, 4 feet wide; weight of rails, 35 pounds per yard; is intended solely for transportation of ore from the Cobre mines to the company's pier at Punta de Sal.

The only road worthy of name is the one leading to Santiago, and it is barely passable by wagons in good weather. Appropriations have been made for improving the road, and it is expected to be macadamized throughout in the course of a year (1907). There are trails from Cobre leading to the south, west, and north, and connecting it with neighboring towns.

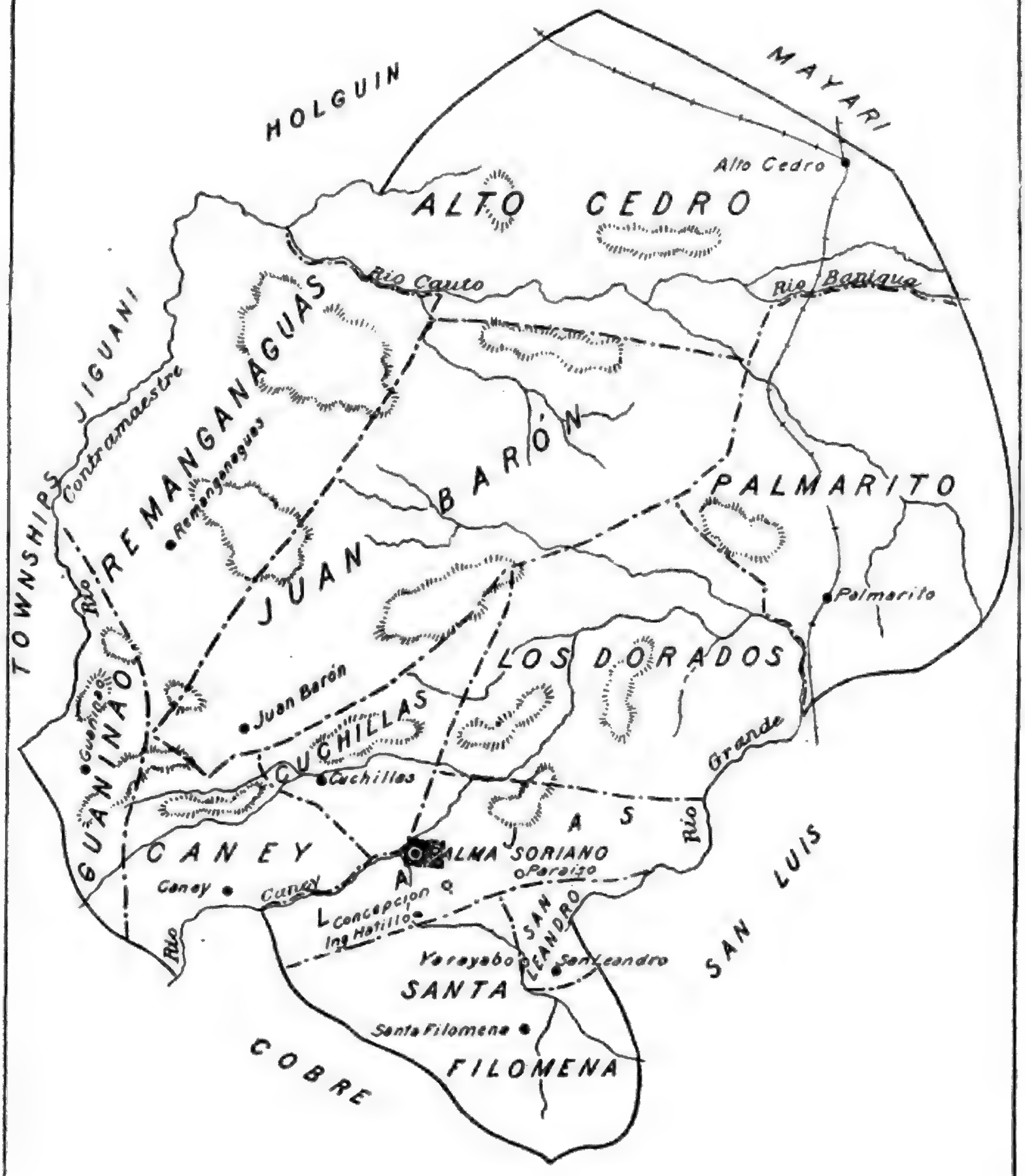
In the town is kept the "Virgin of Cobre," and its presence adds considerably to the importance of the place, as the Virgin is the one most venerated in Cuba.

Aserradero.—Barrio and village. The village of Aserradero is the only one in the barrio. It consists of about half a dozen wooden huts, situated 18 miles from Cobre on Santiago-Manzanillo coast trail. The principal business in this neighborhood is the taking out of hard wood. Charcoal is also made and shipped to Santiago. There is a cattle ranch near the village.

Botija.—Barrio and sitio. Sitio is situated about 2½ miles north of Cobre and consists of one house.

Brazo del Cauto.—Barrio. Contains no villages or towns, although isolated huts are sometimes found and small fincas are frequently encountered.

PALMA SORIANO TOWNSHIP



Caimanes.—Barrio. A rural district east of Cobre.

Dos Palmas.—Barrio and village. The village is small and the only one in the barrio. It has a few stores, and is situated 12½ miles from Cobre on Camino Real to Manacas and on the Cauto River. The industries of the vicinity are the raising of stock, coffee, and cacao.

Ermitaño.—Barrio. Contains no villages or towns, although isolated huts are sometimes found and small fincas are frequently encountered.

Hongolosongo.—Barrio and village. Contains but one village, Hongolosongo, which is situated 5 miles southwest of Cobre, on a cart road connecting with Cobre. A good-sized place, having a number of stores. In the barrio are a number of stock farms and fincas raising coffee and cacao.

Manacas.—Barrio. Situated about 20 miles northwest of Cobre and contains no villages or towns, although isolated huts are sometimes found and small fincas are frequently encountered.

Nima-Nima.—Barrio. Contains no villages or towns, although isolated huts are sometimes found and small fincas frequently encountered.

Río Frío.—Barrio. Contains no villages or towns, although isolated huts are sometimes found and small fincas are frequently encountered.

Santa Rita.—Barrio. Situated about 12½ miles northwest of Cobre and contains no villages or towns, although isolated huts are sometimes found and small fincas are frequently encountered.

TOWNSHIP OF PALMA SORIANO (CAPITAL, PALMA SORIANO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital. *Miles.*	Population.
Palma Soriano	Norte del Poblado	Urban		1,247
	Sur del Poblado	...do		1,086
Alto Cedro	Alto Cedro	Rural	35	1,621
Caney	Caney	...do	5	2,593
Las Cuchillas	Cuchillas, Las	...do	3.1	2,222
Melillas	Dorados, Los	...do	3.3	1,972
Guaninao	Guaninao	...do	14	1,060
Juan Barón	Juan Barón	...do	7.5	1,532
La Concepción El Paraíso.	Lajas	...do	1.25	2,702
Palmarito	Palmarito	...do	25	1,097
Remanganaguas	Remanganaguas	...do	13	1,175
San Leandro Yarayabo.	San Leandro	...do	6	1,072
Santa Filomena	Santa Filomena	...do	9.5	856

Palma Soriano.—Town. The town is situated 30 miles northwest of Santiago and 10 miles west of San Luis. Population, 2,333. Houses mostly one-story frame; a few have tile roofs and the remainder corrugated iron or thatched roofs. There are two or three stone buildings which were formerly used for Spanish troops; now used as an electric light plant and coffee warehouse. They form a letter "L," the long arm being 123 by 40 feet; walls about 2½ feet thick. For these buildings water is pumped from the Cauto River, one-half mile distant. For the remainder of the town water is carried from the same place by pack animals; quality excellent; quantity limited. Sanitation of town bad. Locality healthful. Could quarter about two companies. Has post-office and private telegraph line. The latter runs to San Luis and to Baire. Good camp site on west side of town large enough for a brigade. Most easily reached from Santiago via San Luis. Earth road from San Luis passable by wagons in dry season.

Alto Cedro.—Barrio and village. Village is 35 miles north of the capital on the Cuba Company Railroad at its junction with its branch to Antilla. It is a railroad village and consists of 15 houses, railroad station, restaurant, water tank and tool house. Connected by wagon road with all points of importance in the province.

Caney.—Barrio and village. Besides the village the barrio contains a number of fincas, some of which bear names. The village Caney is situated about 5 miles from Palma Soriano on wagon road leading southwest. Has about 20 houses. Water from Caney River.

Las Cuchillas.—Barrio and sitio. The sitio is 3.1 miles from Palma Soriano on road northwest to Jiguaní and Baire; a general store and two or three houses.

Los Dorados.—Barrio. North of Palma Soriano and traversed by the Cauto River. Contains one small settlement, Melillas, situated 4⅜ miles from Palma Soriano.

Guaninao.—Barrio and sitio. Besides the sitio bearing its name, the barrio contains fincas known as Caridad de Guaninao and Ramón de Guaninao, and a number of other fincas, which also bear names. The sitio is situated about 14 miles west of Palma Soriano on southern road to Baire. Consists of about 4 houses; water from the Lajas River.

Juan Barón.—Barrio and sitio. The sitio is about 7½ miles northwest of Palma Soriano on the wagon road to Jiguaní; one store and several houses.

Lajas.—Barrio. A rural district adjoining the town of Palma Soriano. It contains village of La Concepción, sitio El Paraíso and ingenio Hatillo.

La Concepción.—Village. Situated 1¼ miles from Palma Soriano, on the road leading southeast to San Luis. Consists of 10 houses and a store.

El Paraíso.—Sitio. About 4 miles southeast of Palma Soriano, on wagon road to San Luis; a general store and two houses.

Palmarito.—Barrio and sitio. The barrio contains the sitio of the same name and a number of fincas situated on the Contramaestre River, northwest of Palma Soriano. The sitio consists of a store, situated about 25 miles by road northwest of Palma Soriano, on a trail that leads off of the old Camino Real de la Isla.

Remanganaguas.—Barrio and sitio. Barrio contains a number of fincas which bear names, besides the sitio. The sitio is about 13 miles northeast of Palma Soriano, on the wagon road known as the old Camino Real de la Isla. It consists of a general store and two houses.

San Leandro.—Barrio and sitio. Barrio also contains Yarayabo. The sitio is 6 miles southeast of Palma Soriano, on the wagon road to San Luis and near crossing of Yarayabo River; two houses; water from river; camp site near for a battalion.

Yarayabo.—Sitio. Situated 4½ miles southeast of Palma Soriano, on the wagon road to San Luis, and about one-half mile from Yarayabo River. Consists of a store and a few houses near the ruins of an old sugar mill.

Santa Filomena.—Barrio and village. The village is about 9½ miles southeast of Palma Soriano, on trail leading south to Santiago, which is known as the old Santiago-Bayamo road. It is near the headwaters of the Río Grande. Good water, forage, and good camping place for a regiment. Several native pack trains are kept in the vicinity. Consists of about 30 houses and one large general store.

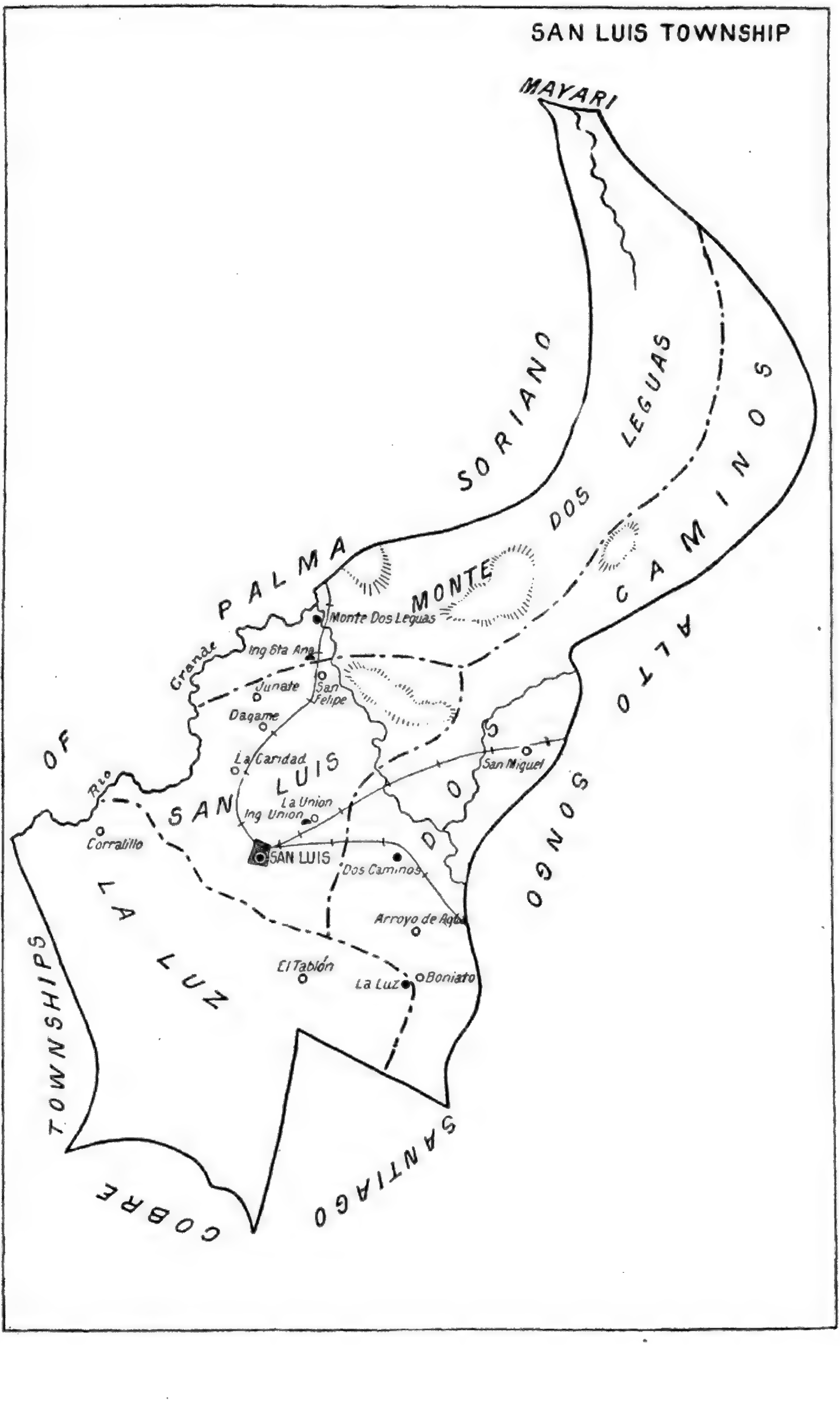
TOWNSHIP OF SAN LUIS (CAPITAL, SAN LUIS).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
San Luis	San Luis	Rural and urban.		6,986
La Unión.				
Dagame.				
Fruta de Pan.				
Junate.				
La Caridad.				
La Guadalupe.				
San Felipe.				
San Agustín.				
Vega Botuda.				
Dos Caminos	Dos Caminos	Rural	4	4,229
Arroyo de Agua.				
Banacoa				
La Cubana.				
La Trinidad.				
Majayabo.				
Puerto Boniato.				
San Miguel.				
San Pedro.				
La Luz	La Luz	do	3	854
Corralillo.				
El Bongo.				
El Tablón.				
Guineo Morado.				
La Dolorita.				
La Yaya.				
Monte Dos Leguas	Monte Dos Leguas	do	7.5	2,143
Santa Ana.				
Palmarito.				
San Nicolás.				
Fosforesa.				
La Adelaida.				
La Cruz.				
Loma Pica.				
Mogote.				
San Simón.				
Santa Isabel.				

San Luis.—Barrio and town. The barrio includes the village of La Unión and other small places known as follows: Dagame, Fruta de Pan, Junate, La Caridad, La Guadalupe, San Felipe, San Agustín, and Vega Botuda.

The town is 13 miles west of north of Santiago and one-half mile west of the main line of the Cuba Company Railroad, with which it is connected by a spur. It is situated on the south side of a gently sloping hill. Some of the streets are macadamized, but not in good repair. About one-half of the business houses are tile roofed; the remainder have tin and corrugated-iron roofs. Nearly all buildings are one-story frame. Thatched huts line the outskirts. Population, 3,441.

Water is obtained from the Arroyo San Luis, west and south of town; distributed by means of pack animals and


SAN LUIS TOWNSHIP
MAYARI
SORIANO
PALMA
LEGUAS
DOS
MONTE
CAMINOS
CAMINOS
ALTO
SONGO
DOS
DOS
Grande
Rio
OF
SAN LUIS
LA LUZ
TOWNSHIPS
COBRE
SANTIAGO
Monte Dos Leguas
Ing Sta Ana
Junate
San Felipe
Dagame
La Caridad
La Union
Ing Union
SAN LUIS
Corralillo
Dos Caminos
San Miguel
Arroyo de Agua
El Tablón
La Luz
Boniato

carts. Water is of good quality, but should be boiled before drinking. Quantity sufficient for needs of a town several times as large.

No sewer system. No regular method of disposing of garbage. Receptacles provided. Town lighted by oil lamps.

The old barracks are in a square, one-story brick building, 120 feet on a side, with interior courts; tile roofs. Three sides are now used by rural guard as barracks and one side as stables. Court used as corral and north side as stables during the first intervention. No running water; no cistern; no modern closets; building in fair condition; sanitary condition fair.

Schoolhouse is in southeast part of town; one-story frame, 120 by 40 feet, tin roof, wood floor; building in good condition except floor; used as post-office and telegraph office; no water.

Stables for about 20 horses at rural guard quarters.

No transportation corrals, but open ground and fields are available, and ground along the San Luis Creek south of town affords grass, fuel, and water in abundance.

No hospitals. No buildings particularly suited for such.

No quartermaster or commissary storehouses. No buildings particularly suited for such, except the rural guard barracks and private buildings, which might be seized or rented; sufficient for all possible needs.

Railroad station of the Cuba Company Railroad, situated in the southeast part of town, where the macadamized road from Santiago and a spur from the main line of the Cuba Company Railroad enter.

Post-office and telegraph office, both in same building, are situated in east side of town, in building now used as schoolhouse; formerly used as Spanish barracks. There is also a private telephone line from this office to central La Unión.

Good camp sites may be found in almost any part of the surrounding country. The most suitable place in the immediate vicinity of San Luis would be along the banks of the San Luis Creek, on either or both sides.

There are no defenses.

The Cuba Company Railroad passes about one-half mile to the east. A spur leaves the main line at San Luis Junction (Entronque San Luis) and runs to the town. There is a depot, which is a one-story frame building, about 80 by 25 feet; baggage room capable of quartering 20 or 30 men or being used temporarily as a quartermaster or commissary storehouse. There are two side tracks, a turntable, and places for loading and unloading animals. This town will soon be the western terminus, or one of the stations on the main line, of the Cuba Eastern Railroad, now building from Guantánamo Bay westward. The grading of this railroad is now complete to the Cuba Company Railroad at a point about 1¼ miles from San Luis and near central Unión (1907).

The principal roads leading out of San Luis are: The macadamized road to Santiago, which leaves south end of town near the depot and follows the Cuba Company Railroad to Dos Caminos. Road to Santa Ana leaves town from the northeast corner and follows, in general, the Cuba Company Railroad. This is an unimproved earth road, but it is passable the greater portion of the year by all kinds of wheel transportation. Road to Palma Soriano leaves town on west side, starting from rural guard barracks; passable good part of the year by wagons.

The town could most easily be approached from the southeast; that is, along the Santiago-San Luis wagon road and the Cuba Company Railroad, and it would be as difficult to defend on this side as on any other. If, however, the mountain passes between Santiago and San Luis were in the hands of the forces holding San Luis, while the country to the north was not in their hands, an attack could be made with equal certainty of success from the north along the Cuba Company Railroad line, keeping to the west of the railroad before coming in range of the town and thus approaching the town from ground which commands it.

La Unión.—Village. Situated on the sugar plantation of the same name, about 1 mile northeast of San Luis. The village consists of about 25 wooden houses built up around the sugar mill. Cart roads to San Luis, Dos Caminos, and Alto Songo. The Cuba Company and the Cuba Eastern Railroads touch at La Unión plantation.

Dagame, Fruta de Pan, Junate, La Caridad, La Guadalupe, San Felipe, San Agustín, and Vega Botuda are simply localities consisting of solitary huts.

Dos Caminos.—Barrio and village. The barrio contains the following localities: Arroyo de Agua, Banacoa, La Cubana, La Trinidad, Majayabo, Puerto Boniato, San Miguel, and San Pedro.

The village is on the Cuba Company Railroad, about 13 miles north of Santiago. Population about 600. It has about 100 one-story frame houses; about one-half of them have tile roofs, one-quarter corrugated-iron roofs, and the remainder thatched roofs. There is a plaza in center of village. There is a Catholic and a Protestant church, schoolhouse, and railroad station. Water supply from Guaninicún River, about one-half mile northeast of the town; quality good; quantity abundant. Could quarter two companies. Has post-office and railroad telegraph. Most easily reached from Santiago by Cuba Company Railroad or by Santiago-San Luis pike, which passes through the village. Surrounding country is rolling, the products being cane and cattle. Locality healthful. Numerous good camp sites in vicinity.

Puerto Boniato.—Sitio. Consists of a store and two huts.

La Luz.—Barrio and sitio. The sitio is about 3 miles southeast of San Luis, on trail leading to the Santiago calzada, and consists of 2 houses. The following are names of localities within the barrio: Corralillo, El Bongo, El Tablón, Guineo Morado, La Dolorita, and La Yaya.

Monte Dos Leguas.—Barrio and village. Besides the village of Monte Dos Leguas, the barrio contains the villages of Santa Ana, Palmarito, San Nicolás, and ingenio Santa Ana. The following places in the barrio are merely names of localities: Fosforesa, La Adelaida, La Cruz, Loma Pica, Mogote, San Simón, and Santa Isabel.

The village of Monte Dos Leguas consists of 20 houses, situated 7½ miles northwest of San Luis. It has a public school and two stores.

Santa Ana (or Santana).—Village. Situated on the sugar plantation of the same name 5⅝ miles northwest of San Luis, on the San Luis-Mayarí cart road and the Cuba Company Railroad. The village consists of about 40 wooden buildings built around the sugar mill. It has a store and a public school.

Palmarito.—Village. Situated 32½ miles north of Santiago on the Cuba Company Railroad and 12 miles north of

San Luis, on the west bank of the Cauto River. Population, about 100. Contains about 15 one-story frame houses and a few shacks. Water supply from the Cauto River; quality fair; quantity abundant. Could accommodate one squad. Post-office. Most easily reached by Cuba Company Railroad from Santiago, and by pike from Santiago to San Luis and cart road from San Luis to Palmarito via Santa Ana on west side of Cauto River. There is a trail up east side of Cauto River from Santa Ana, but it is not as good as the one on the west side. Surrounding country wooded. To the south considerable cultivation. Good camp site on west side of Cauto River.

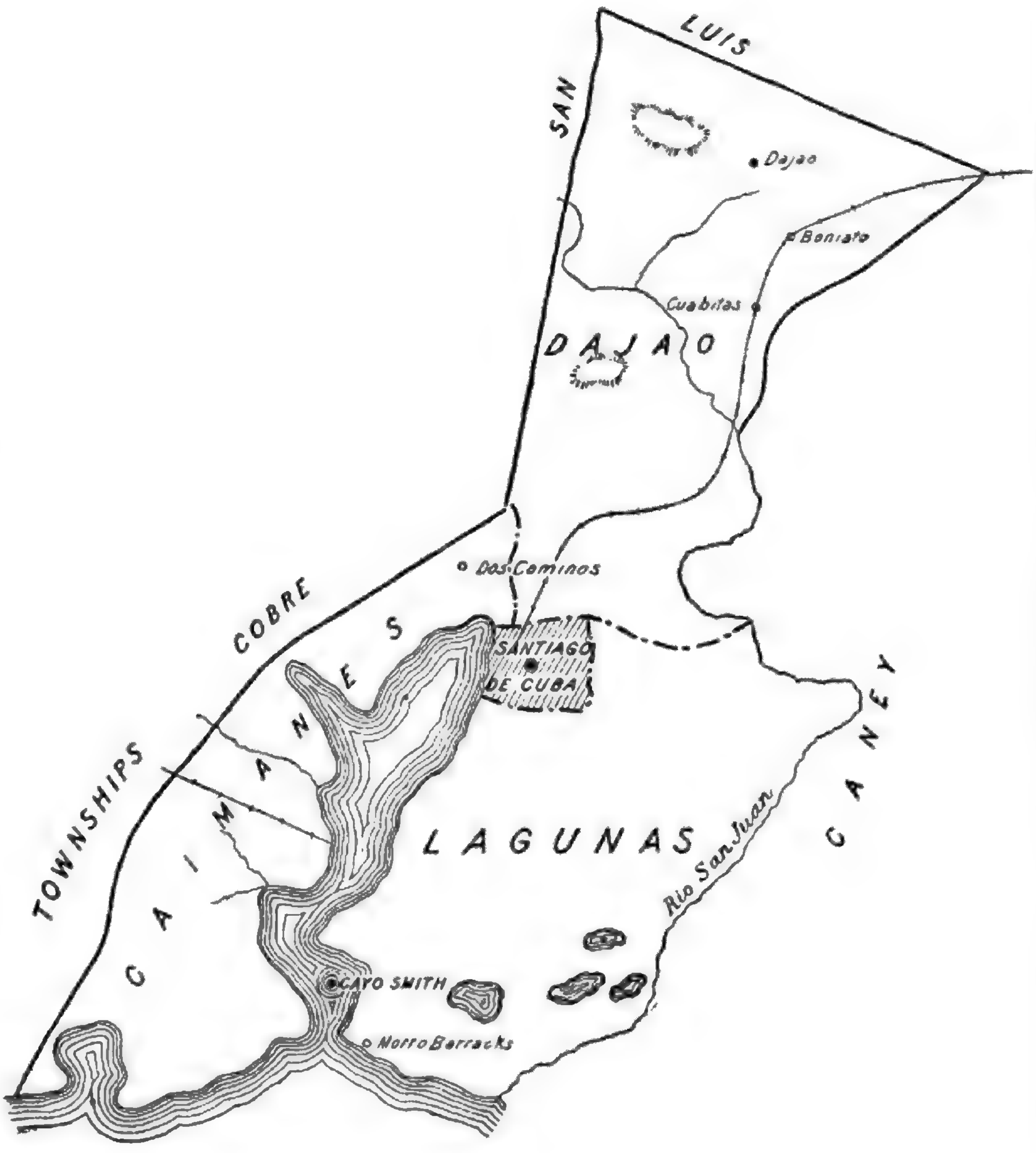
San Nicolás.—Village. Situated 27½ miles north of Santiago on the Cuba Company Railroad and 8 miles northwest of San Luis. Population, about 40. Contains about 7 good one-story frame houses, built for railroad employees. Water supply from railroad water tank, water being pumped from Cauto River; quality good; quantity unlimited. Railroad telegraph station. Could quarter one squad. Surrounding country rolling and cultivated principally in cane. Location healthful. It is connected with Monte Dos Leguas by a cart road.

TOWNSHIP OF SANTIAGO (CAPITAL, SANTIAGO).

Town, village, or sitio.	Barrio.	Rural or urban.	Distance from capital.	Population.
			Miles.	
Santiago de Cuba	Belén	Urban		7,643
	Catedral	do		5,621
	Cristo	do		5,650
	Dolores	do		10,031
	Santo Tomás	do		7,748
	Trinidad	do		8,589
Dos Caminos	Caimanes	Rural	3	615
Cayo Smith	Cayo Smith	do	5	290
Dajao	Dajao	do	5	3,464
Cuabitas.				
Boniato.				
Morro Barracks	Lagunas	do	2	3,775

Santiago de Cuba.—Town. The city is situated in latitude, north, 20° 00′ 16″, longitude, west, 75° 50′ 30″, on northeast extremity of Santiago Bay (Bahía de Santiago); 4½ miles from entrance to bay; 120 miles west of Cape Maisí; 540 miles from Havana by railroad and 810 miles by water. It is the capital of Oriente Province and of the municipality

SANTIAGO DE CUBA TOWNSHIP



(término municipal) of Santiago; both executive offices are in the same building on north side of Plaza de Armas, opposite cathedral. This término municipal is the most important of the province, but covers less territory than any of the others. It is approximately 8 miles long and 3 miles wide, and has a very irregular and ill-defined boundary. Divided into six wards or barrios.

The town is situated on the side of a hill sloping downward to the west of the bay. From the heart of the city the hill slopes also to the north and south. All house numbers are designated as upper (alto) or lower (baja) ——— street. (Example: Marina, Baja, No. 25—No. 25 Lower Marina street.) There are 43 streets running north and south and 35 running east and west. They are all narrow; two wagons side by side would completely block the street.

A street or road, formerly intended for military purposes, starts from the bay front on the north and passes around the city to the east and back again to the bay front on south side of city. It is still called the "Trocha" or "Camino Militar." Practically the entire city lies within the circumference described by this road and the bay front, though poorer people are beginning to build houses outside of it.

There is a museum and a library with about 2,000 bound volumes. The town also has 14 newspapers and periodicals; a market square, the property of the city; a slaughter pen where about 9,000 beeves, 2,000 swine, 800 sheep and goats are killed annually; 5 parks; 2 theaters; 15 churches (12 Catholic, 2 Methodist, and 1 Baptist); an observatory; 23 public schoolhouses with 80 rooms; Institute of Santiago de Cuba; a surveyors' school; 3 eleemosynary institutions, one for poor girls and foundlings, one for the old people, and one for girls (reformatory in character); 6,072 estates valued at $7,942,000; 124 rural estates valued at $349,000; a fire brigade equipped with steam fire engine, hook and ladder wagon, hose cart, 4 horses, and 260 men.

Headquarters of the rural guard of the province is here with a detachment varying from 100 to 200 men. The city police force consists of a chief, a captain, 6 sergeants, and 10 mounted and 90 foot police.

The United States officials in the town are consul, vice-consul, and marine-hospital surgeon.

Next to Havana, Santiago is the most important seaport in the island and ranks second in trade with the United States. Iron and copper ore, vegetables, hard wood, and lumber are the principal exports.

The harbor is visited seven times per month by boats of the Herrera Line, engaged in coast trade, and once per month by boat to Porto Rico and Santo Domingo. The Gallego, Messa & Co. boat makes four round trips per week between Santiago and Caimanera (in Guantánamo Bay). The Menéndez & Co. boats make trips to Havana and Batabanó bi-weekly. The New York and Cuba Mail Steamship Company and Munson Line have freight boats to New York weekly, and passenger boats monthly. Besides these there are regular lines to Spain, England, and Jamaica and numerous tramp steamers touch at the port.

Coal can be had for $8 to $10 per ton. Large quantities at Cinco Reales on east side of bay. Charcoal is principally used for cooking. Wood is sold by the stick at about $1 per hundred; 1,100 to 1,200 sticks required to make a cord. Troops should arrange early for wood supply, as any quantity of seasoned wood on hand would soon be exhausted.

Population, 45,470.

Water supply: Two sources, new and old. Old source wholly inadequate. Water more or less unwholesome. Computed supply of 3 gallons per day per head. Watershed contains dwellings and is open to grazing stock. Dam is at Boniato, 5 miles north of the town on the Paso de la Virgen River. Connected with distributing reservoir with 10-inch main. New system just completed; capacity, 75 gallons per head per day for population of 50,000. Dam is at Dajao, about 5 miles north of town and connected with distributing reservoir by 20-inch main. Sufficient rainfall to fill the new reservoir has not yet occurred (1907). No reason to doubt that system will meet expectations. Both new and old systems will be operated and both use the distributing reservoir in the lot south of the Civil Hospital, which is on top of the hill in the east part of town. Watershed of new system similar to and near old one. Animals may be watered at old Concha Barracks (now the stables for street-cleaning department), situated in east part of town. On street leading to El Caney, near where it leaves town, there are a number of public fountains, not now in use, which could be readily converted into watering places for animals. Nearest fresh-water stream is San Juan River, about 1½ miles east of the trocha; in dry season it contains very little water.

Sewerage: Work on sewer system is being carried on at present and when completed town should have excellent sewer and water system (1907).

Lighting: Streets are lighted by electricity. An electric plant supplies streets and most residences with light and furnishes power for electric street railway.

Barracks: Within the limits of the city there are barracks, warehouses, and public buildings that could readily be converted into barracks for 3,000 men. Besides these there are a great number of private buildings suitable for barracks or quarters that could be secured if necessary, all connected with city water supply.

Descriptions of these available barracks and buildings are as follows:

Cuartel Reina Mercedes. Situated on high ground in northeast part of city, inside trocha; now used by rural guard; is a two-story brick building, 200 by 470 feet, with large interior court. Capacity, 500 men and 20 officers. Lower floor for storerooms, guard rooms, and bath. Upper floor for quarters. Water from city works. There is also a supply from a cistern, with force pump to put water in tanks on level with upper story. Government telephone. Private sewer system. In bad repair.

Cuartel Dolores, Parque Artillería, and Obras Públicas. Three buildings adjoining each other and occupying the greater portion of the block lying between Enramadas, Heredia, San Felix, and Carnicería streets. The first, a single-story brick building, entrance on Carnicería street, is used as a barracks by the municipal police; capacity, if converted into barracks, 250 men; stables for 50 horses. The second, a two-story brick building, entrance on San Felix street, is used for public offices; capacity, 250 men; sometimes called the "arsenal." The third, part one-story and part two-story brick building, entrance on Enramadas street, at corner of Carnicería street; used as offices for department of public works; capacity, 125 men. All connected by government phones. Water from city works. Good condition. Location healthful.

City hall (ayuntamiento). On Marina street opposite Plaza de Armas, and now used for municipal and provincial offices. Could be converted into suitable barracks for 200 men, or would be well adapted for headquarters' offices. Water from city works. City and government phones.

A model schoolhouse, situated on high ground in eastern part of city between Civil Hospital and cemetery; capacity, 200 men; water from city works.

Three freight warehouses on bay front; open sides, corrugated-iron roofing; excellent for temporary quarters; water from near-by hydrants; refuse could be thrown in bay; would shelter 1,500 men; should not be occupied except in emergency warranting obstruction of commerce.

A great number of private buildings suitable for barracks or quarters could be secured if necessary. All connected with water supply of city.

Morro barracks: Situated 5 miles south of town overlooking sea; on top of ridge 200 feet high, of which Morro Castle occupies the western extremity at mouth of bay. Road from town suitable for automobiles. Water supply from its own system. Pump situated on San Juan River, 5 miles from barracks; capacity of pump, 150 gallons per minute. Water drawn from filtration wells. Pipe line to post; first two miles 4-inch, remainder 3-inch. Three-inch distributing mains throughout post. Three wooden tanks, total capacity 75,000 gallons, at post. This system is also connected with the pipe line from the Juraguá iron mines which follows their railroad. If the post system failed, water could be obtained from the Juraguá mines, 19 miles distant, in limited quantities. Water from both sources good. Place would be untenable with active enemy to destroy pipe line. Location healthful. Capacity of barracks, 600 men and quota of officers' quarters. Frame buildings. Good condition. Telephone to town.

Stables: There is shelter that would be immediately available for over 400 animals in the following-described places:

Cuartel de Concha, in east part of city inside trocha. One-story brick building, 350 by 470 feet, with large interior courts. Stalls for 70 animals. Has a granary, and blacksmith, carpenter, harness, and paint shops. Storerooms for various classes of material. At present used by street-cleaning department. Well equipped and in good condition. Cement water troughs conveniently situated. Water from city works. Vacant space on east side suitable for animals and transportation corrals; about 500 animals could be put on picket lines.

Cuartel Dolores, described above, 50 horses.

A stable, which is an open frame structure with corrugated-iron roof, and in excellent condition, capacity 52 animals, is situated on the west side of cuartel Reina Mercedes.

Morro Barracks stables, at Morro Barracks. Four stables, frame, open structures, corrugated-iron roofs. Three in good condition. Total capacity, 280 animals. Water supply same as for troops.

Transportation corrals: Open lot, 325 by 500 feet, on east side of Concha Barracks (described above); no cover for animals or wagons; ground well drained; water convenient. Baseball park, about 300 by 500 feet, is situated on trocha at foot of Santo Tomás street; no cover for animals or wagons except under grand stand, which would cover about 24 animals; water from hydrants 150 yards distant. Morro Barracks has wagon sheds for 20 wagons.

Hospitals: The city has 3 hospitals, with an aggregate capacity for over 1,000 beds, and a great many private residences that could be used for the sick. The hospitals are as follows:

Civil Hospital. One-story brick building; on hill in east part of city; 470 by 490 feet, with large interior courts. Present capacity, 350 beds; could be increased to 500 or even 1,000 in case of emergency by placing canvas over interior courts. Location, healthful. Water from city works. Now used for indigent sick of province. Pay cases also admitted.

Sanatorio de Cuba. Two-story building situated north of city, outside of trocha, on road to Dajao; capacity, 30 beds. Private hospital; pay cases only. Does not appear to be healthful location; swampy ground close at hand.

Sanatorio Español. Small building south of city, outside of trocha. Entrance near Calvario street. Capacity, 20 beds. Formerly used as officers' hospital. Location apparently healthful. Water from city works.

Quartermaster and commissary storehouses: A railroad warehouse near railroad station; formerly used by American troops as forage storehouse; frame building, 300 by 30 feet; condition good. Reina Mercedes Barracks has storerooms for limited supply of quartermaster and commissary stores. Morro Barracks has quartermaster and commissary storehouses ample for needs of troops that can be quartered there. Private warehouses plentiful if needed in case of emergency. Rent would be exorbitant.

Location of important offices: Railroad station is at north end of Cristina street on bay front. Post-office on Heredia street, corner of San Juan Nepomuceno. Telephone offices: (*a*) Government, on San Felix street, baja, in same entrance as arsenal; no number; connects government offices only. (*b*) Private, public service, "Red Telefónica;" San Felix, baja, No. 12. Lines to Dos Caminos, Cubitas, and to Boniato. There is only one telegraph office, and it is in same office as government telephone and connected by telephone with French and British cable offices.

Ice factories: (*a*) Santiago ice factory, situated at No. 15 General La Hera street, on bay front, near south end of Cristina street. (*b*) Compañia Cubana de Hielo, near electric-light plant in south part of city; on bay front; no street or number. Capacity of first, 45 tons daily; of the second, 25 tons daily. Ice pure and of good quality.

Camp site: The open lot around cuartel Reina Mercedes is the only place suitable in or very near the city. Ground slopes so as to permit good drainage. Location healthful. On both east and west sides of barracks there is a plot 300 by 500 feet. By using latrines of barracks this would permit two battalions, war strength, to camp in the lot around the barracks. Total, 1,200 men. Fuel in limited quantities near at hand. Water from city works. Grass plentiful within radius of 1 mile.

Railroads: The town is the terminus of three railroads; one public and two private. These railroads are:

Cuba Company Railroad, of which Santiago is eastern terminus. A standard-gauge road which with connecting lines reaches to Havana. Consequently, all places in Cuba reached by this trunk line and its feeders are accessible by rail from Santiago.

The Juraguá Iron Company's railroad. A narrow-gauge road running from pier, 1 mile south of city on bay, to mines at Firmeza, 19 miles distant to the east; used only for carrying ore. No station in city. Road skirts seacoast from mouth of San Juan River to Siboney. This road is not provided with accommodations for public service, except for a few local passengers.

Cobre Railroad. A narrow-gauge railroad connecting the mines of Cobre, 8 miles distant, with west side of bay at Punta de Sal, where there is a smelter and pier for loading ore. This road is not provided with accommodations for public service.

Roads leading out of town: To Cobre; good wagon road only as far as Dos Caminos, 1½ miles from Santiago; road passable for ox carts from Dos Caminos to Cobre, though wagons lightly loaded may get through. To Caney, 3½ miles; calzada entire distance. To Morro Barracks, 5 miles; good earth road. To San Luis, 20 miles to the north; calzada. From this calzada a wagon road branches at Cristo and goes to La Maya, 22 miles from Santiago.

Best line of approach to attack: As the town is now defended there appears to be no reason why war ships might not readily enter Santiago Bay and land troops in the town under protection of their guns. Should the fortifications now existing be more strongly armed and torpedoes block the channel the best plan would be to land at Daiquirí or Siboney and make a dash for the town.

Caimanes.—Barrio. Situated west of Santiago and contains the village of Dos Caminos.

Dos Caminos.—Village. On the Santiago-Cobre road about 1 mile west of Santiago. This village is of no military interest, being practically a continuation of a street of Santiago. The street is macadamized from the trocha to the western limits of the village.

Cayo Smith.—Barrio and village. The village is on a small island in Santiago Harbor, near entrance; about 5 miles by water from Santiago. It has about 200 inhabitants, mostly fishermen, and a station for pilots.

Dajao.—Barrio and sitio. A rural district north of Santiago and containing the sitio of Dajao and the villages of Cuabitas and Boniato. The sitio of Dajao is about 5 miles north of Santiago near the dam which has been built in connection with the water supply of that city. It consists of a few houses.

Cuabitas.—Village. About 3½ miles north of Santiago on the Cuba Company Railroad and Santiago-San Luis highway. Consists of about 40 to 50 one-story frame houses, most of them of recent construction and containing among them some pretty summer homes of Santiago families. Population, about 200. Water supply same as for Santiago, the waterworks being situated near the village. Shelter for one platoon. Post-office, railroad station, and public-service telephone connecting with Santiago are at the rural guard quarters. Village most easily reached by railroad or by macadamized road from Santiago. Country to the south of village rolling and of same general level as village; to the north increases in altitude. Land principally in pasture. Location healthful. Camp site in vicinity for a battalion.

Boniato.—Village. About 4½ miles north of Santiago, being the second station on the Cuba Company Railroad. Population, about 150. About 20 one-story frame houses. Water supply same as for city of Santiago. Could quarter about one platoon. Post-office and railroad telegraph and public telephone to Santiago. Most easily reached from Santiago by Cuba Company Railroad or by the calzada, which forks here, one branch going to San Luis, the other to Cristo. Situated in a valley between hills several hundred feet high on both east and west sides. Land of surrounding country devoted to pasture and the raising of fruits. Good camp site south of village for a battalion.

Lagunas.—Barrio. Contains Morro Barracks and a number of fincas.

CIÉNAGA DE ZAPATA.

CIÉNAGA DE ZAPATA.

GENERAL DESCRIPTION.

The swamp lies in the southern part of Matanzas and Santa Clara Provinces. It is continuous, but by common consent it is divided into two parts, known as Occidental and Oriental. The imaginary dividing line runs northeast from the head of the Bahía de Cochinos. Along the northern and eastern edges of the swamp there is a heavy strip of timber ranging from one-half of a mile to 8 or 9 miles in width. The strip is in places high and dry and in others low and exceedingly difficult to cross.

This part of Cuba has always played a most important part in the various uprisings and will from its very nature continue to do so in any uprisings which may occur in the future. The Spaniards never succeeded in penetrating the Ciénaga to any great extent. They contented themselves with remaining along the highlands beyond the swamp and occasionally sent in raiding parties to fire upon supposed insurgent camps.

In 1898 several Spanish columns operated along the south coast and although they drove the insurgents back from the high ground of the Península de Zapata they did not succeed in penetrating the swamp proper, and contented themselves with controlling the coast. These columns operating on the península and along the edge of the ciénaga proper killed all the animals that could be found, but this was merely a waste of energy as in the ciénaga there is an inexhaustible supply of fish (principally biajaca and manjuarí), an unlimited number of wild fowl and turtles and a vast number of crocodiles. They also burned that part of the península which lies on high ground but the ciénaga proper can not be burned except that part covered by dry grass.

Strong Spanish forces were maintained along the northern part of the ciénaga at various places and at one time several posts were established along the southern coast, but these latter were only temporary.

The Jocuma-Orbea Trocha along the northeastern part of the ciénaga controlled that region and Spanish columns stationed at or near Zarabanda, Torriente, Jicarita, and other points farther north controlled the country which lies along the swamp.

The Cubans divided the swamp into several zones, each under the command of a general. One district extended from Jicarita west to the península; a second, from Jicarita to Torriente and to the península; a third, from Torriente to Zarabanda and to the Bahía de Cochinos; a fourth, from Zarabanda to Orbea and to the Bahía de Cochinos; a fifth, from Bahía de Cochinos to the east, and the sixth, known as Ensenada, embraced the Península de Zapata and as far east on the mainland as La Ceiba in Santa Clara Province.

Their method of warfare was to establish permanent camps in the cayos and montes in the open swamp and temporary camps in the broad band of timber. From these vantage points expeditions would attack and harass the Spaniards in the vicinity. When pushed back by the Spaniards they retreated to the open ciénaga and with one or two exceptions were never pursued seriously. When insurgents in force met Spaniards in force the former invariably scattered by the numerous trails to the swamp, after inflicting such damage as they could. If the Spaniards pursued they would double back by well established trails and deliver a blow from the flanks and rear.

The insurgents operating in the ciénaga lived on fish, fowl, and turtles and, when nothing else could be obtained, on the flesh from the tail and lower part of the body of the crocodile; this latter meat furnished the bulk of the food of the insurgents and while rather strong is quite palatable.

A large part of the swamp is covered with a floating growth of moss which is very poisonous and creates ulcers on the legs. This plant is especially poisonous while the sun is shining on it and therefore crossings of the ciénaga should be so planned that the portions covered with moss can be traveled early in the morning or late in the evening.

If it is necessary to cross during the day, members of the party should be cautioned to keep in the same path, as in this case the contact with the moss is only felt to its fullest extent by the first two or three men.

In the center of the Ciénaga Occidental there is a large mangrove growth (mangle grande) and in this camps can be made as follows: The roots of the mangle are very strong and grow to about 10 feet above the ground. They are cut off and the tops of the trees are spread over them, thus making an excellent platform which affords a safe retreat from crocodiles.

South of the ciénaga proper the ground is very rough and is covered with rocks in which there are many holes and they cut and bruise the feet of animals. These rocks are known as "Dientes de Perro" (dog's teeth). In crossing the different parts of the ciénaga various methods must be used. It is essential to avoid grasping the various grasses, as most of them cut very severely, and there are vines which poison the hands. In places it is necessary to stand up, extend the hands over the head, and fall full length forward, thus breaking a way through the thick grass. One of the principal things to be avoided in crossing the swamp is the "fish cave" or "biajaca hole." These holes are from 3 or 4 inches to 3 or 4 feet in diameter, and from 6 or 8 inches to 8 or 10 feet in depth. Where the swamp is covered with water they can not be detected and they are liable to be fallen into unexpectedly. In traveling over territory of this description the arms should be kept partially extended so that if a hole is dropped into the arms may strike the sides of the hole and prevent complete submersion. Wherever it can be done it is advisable to burn the dry grass in the swamp, as this materially aids progress.

Four-footed animals can not get into the swamp proper and pack outfits are absolutely useless there. In spite of the difficulties, it is believed that a determined body of troops operating from various points in and along the ciénaga, both to the north and south, could clear it of all active enemies.

Careful attention should invariably be given to the selection of men for service in the swamp. Those subject to fever should never be taken to this locality, and quinine should be regularly taken by all men serving therein.

Pack animals would be of but little or no service. The men should be furnished with heavy shoes and well-fitting canvas trousers. Average shoes and trousers will last but a short time in the swamp.

VEGETATION OF THE CIENAGA.

The vegetation of the ciénaga is varied and consists of grass, plants, vines, bushes, and trees. They are used for various purposes, and many have medicinal properties and furnish about all the medicine used by the inhabitants of the surrounding country. Lumber and charcoal are the chief exports from the Ciénaga district and most of it goes from the Bahía de Cochinos. There are no sawmills, however, the lumber being shipped in the rough.

The following are the principal bushes, vines, grasses, and plants:

Ajencón.—A bush growing to a height of about 3 feet; has no uses; found all over Cuba, but especially in the ciénaga.

Alacrancillo.—A small plant. It is crushed when green or dry and applied to ulcers as a salve. This salve will kill worms which infest sores on animals in Cuba. Found throughout Cuba and especially along the edges of the ciénaga.

Bagá.—A bush growing to a height of about 6 feet. Has edible fruit, about 3 inches in diameter, which is ripe in August and September. Quite plentiful around the ciénaga.

Bejuco de parra.—A vine which when green is very strong and can not be broken; must be cut. Pieces are cut and sucked to secure water; fruit is crushed and produces a fair quality of vinegar; vine has no thorns. Is found all over Cuba, including the ciénaga, where it is much in evidence and renders progress very difficult.

Bejuco ubí.—A vine which forms a most serious obstacle to passage through the woods; it is very strong and must be cut; suitable for making baskets.

Camagua.—A bush growing to a height of 12 feet; berries are eaten by hogs, but man can also eat them, and they will sustain life for a number of days; very plentiful along the edge of the ciénaga.

Cebolleta or cebollín.—A grass which grows to a height of about 2 feet; bulbs furnish excellent food for hogs; very plentiful in the ciénaga.

Cortadera.—A grass which cuts very severely and renders progress exceedingly difficult. Has saw-like edges, the teeth being stiff and short. Each tooth has, in turn, teeth along its edges. Cuts from this grass fester and do not heal readily; persons traversing the open ciénaga are apt to sink in the holes common to the ciénaga and then catch at this grass to save themselves; found in the ciénaga, where it is the chief growth.

Doradilla.—A plant belonging to the fern family and growing on trees well toward the top; appears dry and dead, but will freshen up and become green when placed in water; liquid obtained by boiling the plant in water for about two hours used as a remedy in case of kidney complaints; found throughout Cuba, but principally in and around the ciénaga.

Horiguilla.—A poisonous vine which irritates the skin; effects of poison lost in about two hours; found very generally in the ciénaga.

Jibá.—A bush which grows about 6 feet in height. The liquid made by boiling the bark and leaves in water for about two hours is used as a remedy for internal bruises and strains; the dose is one large cup the first thing in the morning; found very generally in Cuba, and especially along the edges of the ciénaga.

Junco de ciénaga.—A grass about 3 feet in height; extensively used in making mats; good fodder for animals; found in the ciénaga only.

Llana.—A bush which grows to a height of about 15 feet; spreads over a large area; furnishes the best material for charcoal; found in great quantities in the ciénaga.

Lengua de vaca.—A plant growing to a height of about 10½ feet; fiber is extensively used for making rope and in weaving cloths; is of a very fine quality; found on high ground, especially in rocky localities.

Mate.—A species of leguminous bejuco. During the dry season withers, dries up, and becomes brittle; has no thorns; grows on trees and is found along the edges of the ciénaga.

Malva-té.—A bush which grows to a height of about 3 feet. The decoction obtained by boiling roots, bark, and leaves in water for about two hours and then adding sugar is used in lieu of drinking water in all cases of stomach trouble. Found on high ground, including high places in the ciénaga.

Mangle rojo.—A bush which grows to a height of about 15 feet; the bark is used in all tanneries in Cuba; used also in the treatment of leprosy at the Leper Hospital in Havana.

Maceo.—A reed which reaches a height of about 6 feet; roots used as food for hogs; leaves used in making mats for the underside of saddle pads; blossoms dried and used for stuffing pillows, etc. Found in great abundance in the ciénaga; similar to the cat o' nine tails of the United States.

Mangle colorado or de una.—A small stubble having no leaves and growing to a height of 1½ or 2 feet above the surface of the ciénaga; principally found where the water is salty.

Platanillo de Cuba.—A bush reaching a height of about 6 feet; liquid secured by boiling leaves, branches, and fruit in water for two hours is applied to ulcers and similar sores. The powder secured by pulverizing the leaves after they have been thoroughly dried over a fire is sprinkled over the sore after it has been treated with the decoction. Found on high ground along the ciénaga.

Pitajaya.—Grows on trees, large bushes, rocks, fences, etc.; similar to the cactus; fruit at base of flower is considered a great delicacy and commands a good price in the market. The thorns of this vine cause festering wherever they enter the skin and are exceedingly hard to extract on account of their small size and the great depth to which they penetrate. Found throughout Cuba, especially in the ciénaga.

Tocino.—A vine which makes progress over land where it grows exceedingly difficult; is very strong, and the prick of its curved thorns is very irritating. Liquid obtained by boiling the roots in water is used as a remedy for colic and kindred complaints; dose, three cups a day. Is found in rocky localities along the ciénaga.

Yamagüey.—A bush which grows to a height of about 15 feet. The wood is very hard and durable and is much used for fence posts; will not rot in water.

Yerba brujas, or yerba paraná.—A grass which is excellent feed for stock; found in wet places, especially around springs and lagunas in the ciénaga.

Yerba de la sangre.—A bush which reaches a height of about 4 feet; liquid, obtained by steeping leaves in hot water, used as a remedy in cases of rash and other impurities of the blood. There is another variety having the same common name which has astringent properties and is used to stop bleeding, hemorrhage, etc.

Zarza.—A vine growing on trees and along the ground and which renders progress very difficult; very strong and has long thorns. From these thorns other thorns grow in all directions. In the swamp the vine is found below the surface of the water and makes walking difficult and painful. Found very generally throughout Cuba.

The following fruits are found in and in the vicinity of the swamp: Naranjo (orange); mango; ciruela (large plum); aguacate (alligator pear); guayaba (guava); guanábana, the "sour sop" of the Southern States; uva caleta (creek grape); chirimoya, a species of sugar plum, sweet, with slightly acid taste; lima, a species of small yellow orange, has a tart taste; anon; hicaco blanco, a small berry somewhat like a plum, having a large stone and clear yellow meat with little or no taste, usually found in swampy places, has white or yellow skin; hicaco colorado, same as above, except that the skin is a dark blue.

In the wooded portions of the swamp is found nearly every variety of tree that the island contains.

THE CIÉNAGA OCCIDENTAL.

That part of the Ciénaga de Zapata lying west of a line running northeast from the head of Cochinos Bay is known as the Ciénaga Occidental.

LAGUNAS.

There are a great many lagunas or lakes in the Ciénaga Occidental. One of their chief characteristics in this part of the ciénaga is that they are subject to a very remarkable shrinkage during the dry season, although as a whole they are very much larger than the lakes in the Ciénaga

Oriental. They are also more apt to be muddy and to contain poorer water than those of Ciénaga Oriental, and this applies more especially to the lakes in the belt of woods along the edge of the ciénaga.

In describing the principal lakes, those lying on the high cultivated ground to the east and north have also been included, as they drain into the ciénaga and would be one of the chief supplies of water for camps situated along the ciénaga.

Pato.—About a mile southeast of Manjuarí. In the dry season this laguna becomes very small, but during the wet season it is about 400 yards square. The water from the laguna can not be used for drinking purposes by men, but it would, with the Lagunas El Bagá and Bruno, furnish an excellent supply of water for the animals of a mounted command. The approaches to all three of these lagunas are good and horses can be taken to them at all times. They are close together, and there is an abundance of good grazing near at hand.

La Ceiba.—Situated in the Europa pastures not far from the heavy woods. Small in the dry season, but much larger during the wet months. Principally surface water; not fit for drinking; animals from all the surrounding country water at this place.

Hicacos.—Excellent water. In the dry season this laguna practically disappears, but an abundance of excellent water can be secured by sinking temporary wells in the dry bed.

Bono.—A small laguna which contains a constant supply of water for animals only. It is in a small clearing in the heavy woods and can be reached by horse at all times.

Arroz.—Small laguna; excellent water; in heavy woods; good approaches and high ground. Camp site of insurgents.

Guamajal.—Small laguna about 1½ miles southwest of Jicarita. Excellent water; the Spanish General Molino established an arsenal and camp at this point.

La Dama.—Large laguna with bubbling spring in center; about 1½ miles southeast of San Joaquín de Pedroso; in heavy woods; excellent water.

Pato.—This laguna is extremely difficult to locate. It is in the open swamp and is almost entirely covered with the tall swamp grass. The only difference between the laguna and the surrounding ciénaga is in the depth of water. In crossing the ciénaga at this point the greatest care must be taken in order to avoid getting well into this laguna. When the insurgents were driven back into the ciénaga, near the close of the insurrection, some of them while crossing the open ciénaga at this point were lost in the laguna. Some of the inhabitants living along the edge of the ciénaga claim that they were killed by crocodiles, which are found in the laguna in great numbers, some of them being very large. The water is better than that in the open ciénaga, but it is not very good. There are fish and turtles in the laguna.

Yanan.—This laguna is in the open ciénaga. It contains excellent water and an abundance of fish and turtles. Crocodiles are also found here in large numbers.

El Martillo, Estacada, Mujer, El Toro, La Querida, Faldiquero.—These lagunas are all near the finca Entrada and have outlets which eventually flow into the Laguna Salchicha. The water is of excellent quality and could be used for drinking or for animals. The vicinity affords abundant camp sites for large bodies of mounted or foot troops.

Jucaral.—Near the finca Dagama. It is about a quarter of a mile in diameter and is a hollow in the ground; water is good for animals but not for drinking purposes. It abounds in fish and turtles. From this laguna there is an outlet to the Laguna Corojal and Laguna las Cuevitas.

Los Azules, Milpa, Ojo de Morales.—These lagunas are south of the finca Porvenir; all contain excellent water and have outlets to the south. North of the finca Porvenir there are also two small lagunas containing fairly good water which is used for animals only.

Milyan, Los Corrales.—These two lagunas are west of the colonia Biajaca in the open fields. Both contain excellent water, and in the vicinity there are good camp sites.

Domingo García.—This laguna is to the east of the Entrada-Jagüey Grande Camino Real and near the finca San Luis. It is a deep hole surrounded by heavy woods and, although quite near the road, could be easily passed by. It is very deep and contains excellent water. It was a constant camping place for the insurgents during the insurrection of 1895–1898.

Don Flores.—A small laguna near the finca Las Piedras; contains excellent water and an abundance of fish and turtles.

El Pato.—South of the sugar mill Australia about 2½ miles. This laguna is about 200 yards wide and about 450 yards long. In the center is a very deep cave about 50 yards in diameter. Along the edges of the laguna the ground is high and affords a good camp site which was used by the insurgents. This laguna contains excellent drinking water and an abundance of good fish.

Tierra Prieta.—This laguna is about half a mile south of the Laguna El Pato. There is a well near by. Both contain excellent water which was used by the insurgents camping in the vicinity.

Patabanal.—Near the finca Los Alpes; contains poor water.

La Miscelanea.—To the northwest of the Laguna Patabanal; this laguna is very deep and about 250 yards wide and 500 yards long. It was a permanent camp site of the insurgents; water good.

Poma Rosa, Las Avispas.—These lagunas are both on the finca Yuca and contain excellent drinking water.

Blanquisales.—Near the Cayo Verde in the open ciénaga; contains excellent drinking water and an abundance of fish, turtles, and ducks.

Carocola.—Near Murga, on the Jagüey Grande-Murga Railroad; this laguna is crossed by the railroad track, and where the track crosses the laguna it has been filled in, leaving only a connecting stream. Contains excellent water and has an outlet to Arroyo Carocola, which flows into the Laguna Salchicha.

Grande.—Northwest of Murga; this laguna is filled with tall grass and contains excellent water and an abundance of fish; is hard to find. It has an outlet to the Laguna Salchicha.

Bonita.—Near the finca Pailita; a large double lake. These lakes lie on both sides of the road, and there is a bridge over the stream connecting them known as Puente de la Pailita. They contain excellent water, and there is an outlet to the Laguna La Fuente and from there to the Laguna Vulcan.

Brazo Malo, Palma Bonita, Manacas, El Carmen, Vulcan.—These lagunas are all near the finca Corralillo de Zarabanda. All have outlets through the Laguna Vulcan and Arroyo of the same name to the Laguna Salchicha in the open ciénaga.

Las Papas, La Garcita, Tumbadero (in the open ciénaga), Del Arroz, Mocho, Senilla.—These lagunas are near Zarabanda; all contain excellent water and have outlets to the Río Santa Fé. The Laguna Tumbadero is an enlargement of the Río Santa Fé as it flows through the open swamp.

Guanal.—Near the finca Ceiba Gorda. This is a very large and exceedingly deep lake, which contains an abundance of fish and turtles and is infested by great numbers of crocodiles. The laguna is about 3 miles long and the surface consists of floating islands. These are large bushy plots of earth which change from side to side as the wind changes, and they materially alter the shape and appearance of the lake. The lake contains excellent water, and there are good camp sites in the immediate vicinity. There is also shelter enough for a large hospital.

Salchicha.—Southwest of Murga in the open swamp is the large, shallow Laguna Salchicha. Into this laguna flow practically all of the small streams from the high ground to the north and northeast of it. From it flow two small streams which join at the spring Salchicha, and from there flow out into the open ciénaga. The lake contains an unlimited supply of fish, turtles, and wild fowl. It also contains large numbers of crocodiles. The insurgents camping in this part of the ciénaga secured vast amounts of fish and turtles from this lake, and it was a place of refuge when the Spaniards attempted to penetrate the swamp.

SPRINGS.

Only the more important springs and those which have in the past been used as camp sites are described, although many more will be found on the Military Map. The springs along the northern, northeastern, and eastern borders of the Ciénaga Occidental have been included under this heading, as they pertain to the water supply for troops camping in and along the ciénaga. Practically all the springs in the ciénaga east of Jicarita are rock openings in the ground. Those to the west of Jicarita are more apt to be mud holes, which, however, contain excellent water. The springs between Manjuarí and Yuca are apt to be muddy also, and they contain large numbers of fish.

Hicacos.—Near the finca Manjuarí and to the north of the trail Tierra Entrada. Contains excellent water, but is only available in the dry season, as during the wet season the surface water collects and forms a large, muddy lake. The spring is in a small clump of trees and is among rocks. The water supply is practically unlimited, and was constantly used by insurgents camping in this vicinity.

Luisa, *Reverto*, *El Roble.*—These springs are in the interior of the swamp to the southwest of Majuarí; all are situated in cayos in the open ciénaga and contain excellent water.

Narenga.—To the west of Hamomon; spring is in the heavy timber and contains excellent water. It furnished water for the insurgents camping in this vicinity.

Herradura.—Situated south of Hamomon and just north of the open ciénaga in some heavy timber. It contains excellent water and was used by the insurgents in retreating through this part of the ciénaga. From the spring there is a direct road to Manjuarí.

Portura.—These springs are south of Manjuarí and on the trail Camino Carril del Juncal. They contain good water, but would have to be thoroughly cleaned out before being used.

El Rey.—South of the springs of Portura and just north of the open ciénaga. Contains excellent drinking water, but has muddy and marshy surroundings.

Cayo Verde.—South of Manjuarí in the open swamp and east of the trail Camino del Juncal; in a high cayo about 30 yards in diameter. It contains excellent water and an abundance of fish and turtles. Is also a breeding place for crocodiles.

Sevilla.—In the open swamp south of Manjuarí and east of the trail Camino del Juncal. Is on a trail running south from Manjuarí into the open ciénaga by way of several montes, all containing springs. Contains excellent water and was used as a point of refuge when the Spaniards pushed the insurgents back into the swamp.

Cayo Palmar, Radero.—There are excellent springs at both these points; both are in the open swamp and on important trails.

Estero del Roble.—At the headwaters of one branch of the Río Jatiguanico. This spring is in the woods and on high ground and contains excellent water which continually bubbles up from the bottom. There are two buildings at this spring and there is a canal which forms its outlet to the river.

Jimagua, El Lindero, Guanito Grande, Guanito, Gaine Prieto, La Jumado, Las Tres Palmas, Cayo Cuatro Palmas, La Paila, Chipi, Pailita, El Regino, Babiney Secado, Landrea.—Situated south of the finca Sabar, and all the springs contain excellent water.

Cocodrillito.—South of the finca Sabar. It is apparently the opening of a cave or the outlet of an underground river. At 30 feet, no bottom could be found; contains excellent water.

Edimero de la Nuevo, Coralillo, Jaguajuta, Erencita, Majaguilla, El Lindero, La Piedra del Agua, La Ciruela, Cocodrillito, El Sapo, El Bonito, Perdido, Los Suyoer, La Aguacate, El Bagá, Insurrecto, Iglesias, Piedras, springs of Cantauria.—These springs all contain excellent drinking water and most of them an abundance of fish. They are situated between Manjuarí and Parata along the edge of the swamp and insurgents camping in this section obtained drinking water from them.

Convento.—Southeast of Parata; is one of the best known springs in this part of the country and contains an immense number of fish. The spring proper is about 6 feet in diameter and about 4 feet deep; the water is cold and clear.

La Piedra.—Is very deep and contains excellent water, which is continually bubbling up. It is in the rocks.

La Ciruela.—This spring is very deep and contains excellent clear water.

SPRINGS IN VICINITY OF JICARITA.

Don Pedro, San Martín.—All the springs in the vicinity of Jicarita contain excellent water and especially the springs Don Pedro and San Martín.

Los Sapos.—This spring contains excellent water.

Media Legua, La Yaba, Yuca.—These springs contain excellent water and are on rocky ground in heavy timber.

La Trenchera.—Near the finca López; carefully walled in by the insurgents; contains excellent water and is continually bubbling.

Cocodrillo, Jicarita.—South of Yuca; these springs appear to be openings of underground rivers and contain excellent water.

Las Avispas.—This spring is 50 feet in diameter and contains excellent water. In center is opening of cave 4 feet in diameter, 20 feet deep; surrounded by dense woods; only one trail; known by Cubans more generally as "Ojo de Agua las Avispas de la Sirina."

La Canoa, La Pailita, El Cayo, Jicotea.—These springs are in the open ciénaga, south of Yuca; all contain excellent water and appear to be openings of an underground river.

Los Alpes.—About 2 miles south of the sugar mill Australia; has been sounded to a depth of 150 feet without finding bottom; is apparently the opening of an immense cave; spring is about 75 yards in diameter; there is high ground on all sides of the spring, and it is in a depression in the ground as though the top of a cave had fallen in; contains excellent water.

La Estacada.—The spring La Estacada overflowing into the laguna of the same name is situated in the open ciénaga south of Yuca and near the trail Camino Salchicha. The spring proper is about 10 feet in diameter and about 20 feet deep. It is a bubbling mineral spring; has a slight sulphur taste, and is the best water to be found in this part of the ciénaga.

The following are also excellent springs: Los Arroyos, Cayo Jucaral, Cayo Almicial, Cayo Narcisa, Cayo Galleta, Cayo Caña, Cayo Eciber, Cayo Micial, Cayo Infierno.

SPRINGS ALONG THE RÍO JATIGUANICO.

The river itself can be navigated by small boats to La Lisa. Careful soundings show a clear channel from 4 to 12 feet wide and from 6 to 9½ feet deep up to a point just above La Lisa, so that small vessels can make this trip without any difficulty.

At the time (fall of 1907) there were at La Lisa six large, flat-bottom, hard-wood boats, about 30 feet long, 4 feet wide, and drawing about 15 inches of water. These boats would hold 20 men comfortably. In addition there were two combination sail and row boats, each of which would hold 8 men comfortably. There were also on the river, in addition to the above, 7 boats of about the same size.

The springs along the river are as follows:

Placer de la Lisa.—A salt and fresh spring where there was an insurgent camp site during the insurrection. It is known as the "Estero El Salado," and here there are two small houses. There are both salt and fresh water springs at this point, and the salt-water springs are claimed to have excellent medicinal qualities.

Jatiguanico.—This spring, at the head of a small stream flowing into the Río Jatiguanico, contains excellent water.

Júcaro.—Near the Estero Benitez. This spring is back from the river about 20 yards and can be recognized by several large palms which overhang the bank. The outlet of this spring looks like the opening of a small cave. It contains excellent water, by far the best to be had any place along the river.

Hervidero.—Near La Lisa there is a large bubbling spring in the river, which is known as "Hervidero," and by dipping buckets into the bubbling part of the spring excellent water can be secured.

CAMP SITES.

The Ciénaga Occidental affords a splendid opportunity for guerilla warfare and this opportunity was used to its utmost by the insurgents in the Ten Years' War and in the insurrection of 1895–1898. The following is a list of the camp sites in and along the Ciénaga Occidental:

1. Southwest of the spring Hicacos is a large grove known as "Hamomon," which was used by the insurgents for a camp site until they were driven back into the swamp by the Spaniards. Water was secured from the spring Hicacos. This camp site is invariably dry and would afford enough space for a brigade.

2. Near Hamomon and a little to the west is a large open palm grove which was used by the insurgents under Col.

José Miguel Tarafa as a camp site. This camp site was the scene of a very severe fight between a Spanish column under General Molino and the insurgents commanded by Gen. Eduardo García. Water was secured from the springs in the vicinity.

3. East of the spring Luisa was a Cuban hospital. Here there are many graves.

4. At Luisa, Reverto, El Roque, and El Roble were situated insurgent camps. These camps were occupied when the Spanish columns drove the insurgents from the belt of woods along the northern part of the ciénaga, and in the vicinity was a permanent hospital. These camps were under the command of Gen. Eduardo García and Clemente Dantin. There was a regular line of outposts at various points in the vicinity, and the camps were splendidly protected in every way.

5. Along the edge of the open ciénaga south of Manjuarí are several montes lying a short distance north of Cayo Verde. These montes were the site of a large camp and permanent hospital established by Gen. Eduardo García. Water for the hospital was secured from an excellent natural well, and there are springs in each one of the montes. The camp proper was north of the hospital toward the montes and in heavy woods on the trail Camino Labirir de la Romana. The outposts for this camp were at Portura, Cayo La Plata, Cayo Caña, and Cayo Colmena.

6. At the spring Narenga there was a Spanish camp commanded by General Molino. Water was secured from the spring.

7. Between the fincas Gaquine and La Carera, north of the trail Camino Entrada, there was a camp of 30 Liberals under Marcelino Álvarez and Justo Landa during the summer of 1906. Water and supplies were secured from La Carera. This camp is on high ground back of a stone fence, and occupies a good defensive position.

8. At La Carera, General Bermudez established a camp, and from here Spanish columns operated south for a short distance.

9. At Jicarita there was a very large Cuban camp, commanded at various times by Generals Lacret, Máximo Gómez, Clemente Gómez, Eduardo García, and Clemente Dantin.

This camp was maintained until a Spanish column drove the insurgents back into the swamp.

10. At the spring Pesquero, General Molino established a camp and kept a small body of Spaniards here for some time, but they were eventually driven back.

11. About halfway from Jicarita to the Jatiguanico River, on the trail Camino del Río, is a very high and rocky plateau known as "Cayo de Piedras." This, with the Cayo Palmar, which is east of it, furnished a retreat for the insurgents when driven from Jicarita. Troops holding this position absolutely control the passage to the river. This point was of great importance to the Spaniards and they endeavored to hold it, but only did so for short periods at a time, being invariably compelled to withdraw to the high land north of the swamp. Water secured from a spring in the Cayo Palmar.

12. At Cayo Radero a Cuban camp was maintained, and Cubans seeking refuge from the Spaniards came to this point. The camp was on a high cayo in the open swamp; water secured from an excellent spring in the cayo.

13. Near the Río Jatiguanico, to the east of Placer de la Lisa, is a large, open, grass plain, in the middle of the swamp, which was used by the Cubans as a camping place. It is always dry.

14. Near Hervidero, on the south bank of the Río Jatiguanico and between that point and the spring Estero del Roble, were large Cuban camps, which became permanent after the Spaniards occupied Jicarita. The one at Hervidero was commanded by Gen. Eduardo García.

15. At the spring La Paila there was a large Cuban camp under the command of Aguilera. This camp site can be recognized by the two very large palms at the spring. The Cubans took refuge here when driven from Jicarita, and it was one of the few places where they were attacked in the swamp by the Spaniards.

16. North of the spring Ercucita and east of the spring Jaguaujuta there was a Cuban camp under Capt. Epifanio Gallardo. Water was secured from an excellent natural well in the rocks. This camp was high and dry and is known as the Sabana de Ercucita.

17. About halfway along the road running southeast from near the Laguna Bruno to the Laguna La Ceiba and to the south of it was an insurgent camp, with an excellent well. Here the Cubans were attacked by the Spaniards and a great many of them were killed.

18. South of the above point and near the Laguna La Ceiba there is a well, and here there was a permanent insurgent camp under Capt. Epifanio Gallardo. At this point recruits were received and forwarded to the insurgents. The well has now been filled in, but could be easily cleaned out.

19. South of the spring La Piedra de la Agua and in a monte on the trail running across the ciénaga was an insurgent camp commanded by Andrés Damara. This camp was never molested by the Spaniards.

20. Near the springs Cocodrillito and Convento was a large permanent insurgent camp under the command of Gen. Eduardo García and Tuerto Sanábria. This camp site is more or less marshy in the wet season. Water was secured from small wells about 4 feet deep, of which there are many, and from the Laguna Bono. This camp was never molested by the Spaniards. Approaches are very bad.

21. At the spring Insurrecto was a permanent Cuban camp under Carlos García.

22. At the spring Iglesias was an insurgent camp under Benito Socorro. This camp site is high and rocky, being about 400 yards square. It is known as Las Iglesias.

23. At the spring Convento there was an insurgent camp established by Gen. Eduardo García, which was never molested.

24. At Cayo Perdido there was a permanent insurgent camp under Enrique Orta, whose duty it was to furnish guides for the Cuban officers coming from other parts of Cuba to operate in the ciénaga or having business with the insurgents.

25. At the spring Los Suyoer there was a large permanent insurgent camp and here there is an abundance of good grazing and fuel.

26. At the spring Piedras there was a permanent insurgent camp, at which was situated for a long time the headquarters for this part of the ciénaga. This camp was under

the command at one time of Juan Sebastián, a negro. It was known as Poito de las Piedras and was on high ground.

27. At the spring Aguacate there was a permanent camp of the insurgents, situated on some high ground. It was broken up by the Spanish columns in 1897.

28. At the spring La Jumado was an insurgent camp which was commanded by Gens. Eduardo García and La Rosa. Near this point, at the spring Babiney Secado, was an insurgent camp commanded by Felix Milian. Here there is a large amount of grazing and an excellent supply of fuel.

29. At Radero there was a permanent camp of the insurgents, to which the Cubans invariably fled when pushed back into the swamp along this part of the ciénaga.

30. At the spring Aserradero there was an insurgent camp known as "La Rosa" and commanded by Gen. La Rosa. Here there was a severe engagement between a Spanish column under General Molino and the insurgents under Gen. Clemente Dantin.

31. At the Laguna Guamajal was a Spanish camp under General Molino. Here the Spaniards constructed an arsenal and the camp was maintained until the close of the insurrection. This camp was in a more advanced position, with relation to the swamp, than any other camp maintained by the Spaniards.

32. West of Jicarita there was a large insurgent camp under Gens. Eduardo García, Clemente Dantin, Pío Dominguez, and Benitez Galdós. This was known as the "concentration camp" of the Matanzas Infantry and was in existence until the Spaniards occupied Jicarita.

33. At the springs Enea and Los Judíos there were Spanish outposts for a large Spanish camp in this vicinity.

34. At Cayo Caña, south of Manjuarí, was an insurgent camp commanded by Juan Ebanez. In this cayo cane was planted and raised by the Cubans.

35. At Cayo Colmena was an insurgent camp under Juan Donde. On the montes south of here were insurgent camps for securing crocodiles, etc.

36. At the spring El Sapo de Yuca was an insurgent camp and a large hospital. The ground is high and dry at all times. Guides were stationed here for this part of the cié-

naga and mail was distributed from this point throughout the eastern part of the ciénaga.

37. Near the spring Media Legua was an insurgent camp under the command of Martín Moreira. Here the Cubans were attacked by the Spaniards and were driven out, many being killed.

38. Near the spring La Yaba there was an insurgent camp under Colonel Betancourt and Gen. Antonio Maceo.

39. Near the finca López is a large palm grove. It was used as an insurgent camp during the Ten Years' War and was then commanded by Gen. Gabriel Menocal and Gen. Don. Agustín Rodriguez. During the insurrection of 1895–1898 there was an insurgent camp here under Gen. Benitez Socorro. It was known as La Trenchera.

40. At the spring La Trenchera there was a large Spanish fort, which is still in evidence, and also a very extensive system of earthworks.

41. On high ground near the spring Tulanga was a large insurgent camp, under Jacobo Morales, where the wounded from this part of the ciénaga were sent. South of this camp, in the open ciénaga, was an insurgent camp under Santiago Oña.

42. Near the spring Cocodrillito, south of Yuca, was a large insurgent camp under General Morejón, where sugar was made by the insurgents from cane obtained in the near-by cane fields.

43. At the spring Jicarita General Morejón also established a large camp, which was afterwards commanded by Jesús Aguilera.

44. Near Chu Chu La Perla was an insurgent camp under Pío Sánchez.

45. Near the spring Las Avispas were two insurgent camps under Colonel Funier. The one to the southwest of the spring was an outpost camp. The second or main camp was about one-half mile to the southeast of the spring. Both camps were on high ground. Trails leading to them are through thick underbrush. At one time there were 3,000 people in the large camp. Excellent water was secured from six small springs in the second camp. When finally driven out by the Spaniards the Cubans retreated to the cayos in the open ciénaga by way of Casimba de Morejón.

46. At Casimba de Morejón was a large insurgent camp under Rafael Torres. Water was secured from the streams in the swamp.

47. Near the spring La Caña Castilla were 3 insurgent camps. One under Perico Valdés was on high ground to the east of the spring. This was a large camp, to which the insurgents retreated from Yuca. About 400 yards north of the spring La Caña Castilla, on high ground and among a large number of palms, was a permanent insurgent camp. Here hats were made during the entire insurrection. About 400 yards south of the spring was the third insurgent camp. At this point all parties entering the ciénaga were stopped and held.

48. At the spring Los Alpes there was a large insurgent camp until it was broken up by the Spaniards.

49. South of the spring Los Alpes and along the trail leading into the swamp by the lakes in this region were small insurgent camps under the command of Fernández Sanábria, Pepe Lorenza, and Amelio Fuente. The camp of Fuente was near the small well in the open pasture near the Laguna Tierra Prieta and here sugar was made during the insurrection.

50. Along the trail Camino Salchicha, in the open ciénaga south of Yuca, are several important insurgent camp sites as follows: Los Arroyos, Cayo Narcisa, Caña, Cayo Eciber, Cayo Jucaral, Cayo Galleta, Cayo Micial, Cayo Almicial, and Cayo Infierno. These camps all have excellent water supplies and are on high ground. The camp at Los Arroyos can be readily recognized by the large number of royal palms thereon. Cayo Infierno takes its name from the great number of ants which infest it.

51. At Cayo Narcisa was the headquarters of Gen. Gabriel Menocal during the Ten Years' War.

52. At Cayo Jucaral salt was made in large quantities by the insurgents. These two camp sites were invariably used by large numbers of insurgents.

53. In a large open pasture, southwest of the finca San Joaquín de Pedrosa, was a large insurgent camp under Gens. Eduardo García, Clemente Gómez and Lacret. This camp was abandoned when two Spanish columns under General Molino came from Torriente and attacked and destroyed it.

54. Near the finca Las Brujas was a strong insurgent camp which was broken up by a Spanish column. A large number of insurgents and Spaniards are buried here.

55. At La Guarita, south of Zarabanda, in the open swamp, there was established in March, 1897, a large insurgent camp under Col. Rafael Aguila. This camp was attacked by the Spanish troops toward the end of the dry season in 1897 and many Cubans were killed.

Almost all the springs west of Jicarita were used at different times as camp sites, but because of the peculiar nature of the swamp in this section there were no permanent camps in this part of the ciénaga.

ROADS AND TRAILS.

ALONG NORTHWESTERN BOUNDARY OF CIÉNAGA OCCIDENTAL, CONNECTING WITH TIERRA ENTRADA TRAIL.

1. Manjuarí-Hicaco-Hamomon-Narenga-Jicarita (Tierra Entrada trail); general direction, southwest.

Road leaves Manjaurí going west, passing through a gate and stone fence and running through grazing land covered with bushes. Passes 100 yards south of Hicacos, a large spring which is covered with swamp water during the rainy season.

One-half mile beyond this spring the road crosses a grove on high ground, known as Hamomon, which is always above water. From this point a trail runs to Rincón del Aura, a Cuban camp site.

Half a mile beyond Hamomon the road passes an open palm grove, a Cuban camp site. Here a trail runs south to Louisa, Reverto, El Roque, El Roble, and Laguna Pato, all of which have water. This trail is good.

The main road continues southwest to Narenga, a spring, and from thence west to Jicarita, a Cuban camp site. Wagons with light loads can pass over this road.

2. Hicacos - Cayo Medina - Hervidero - Rio Gonzálo - Finca Maneadero (Camino Medina); direction, south.

This trail crosses the Manjuarí trail 1 mile southeast of Hicacos, passes 100 yards south of Cayo Caña, and also passes the sites of several former Cuban hospitals situated on high ground. This trail was used as a means of retreat by Cuban forces. Hervidero was a Cuban camp site. A trail runs from Hervidero and Río Jatiguanico southwest to Tienda Gonzalo on Río Gonzalo. This trail leaves Hervidero by way of a palm grove and then cuts across the open ciénaga. It should not be attempted without a competent guide unless careful and constant compass readings are taken. It is an old trail used to connect the heads of navigation of these rivers and was much used during insurrections. It is exceptionally bad.

A trail from Hervidero runs southwest to a Cuban camp site on Río Gonzalo, 4 miles from its mouth. This trail runs through heavy mangrove swamps and across open swamp land. From this camp a trail runs north to Los Cristales and southwest to finca Maneadero. These are difficult trails through the swamp.

3. Jicarita-Cayo de Piedra-Río Jatiguanico (Camino del Río); direction, south.

This trail is practicable for animals for a short distance only, after which it is only suitable for persons on foot. It passes through heavy woods. Cayo de Piedra is on high ground and was a Cuban camp site. Along two-thirds of this trail can be seen the remains of an old Spanish corduroy road. Three-fourths of a mile from the river the trail skirts along the eastern edge of an open plain. From this point a trail leads direct to Estero del Roble, Hervidero, and Canal Taracira.

4. Candelita-Don Pedro; direction, south.

Northwest of Jicarita is situated Candelita, which place is connected by trail with the spring Don Pedro. Don Pedro is also connected by trail with Jicarita. These trails are practicable for horses.

A trail also runs from Don Pedro, southwest through the spring Enea, to the open swamp. Horses cannot pass over this trail.

5. Manjuarí-Portura-Rey; direction, south.

At a point 1 mile southwest of Manjuarí, on the Tierra Entrada trail, a trail runs to the spring Rey via the spring Portura. It passes through heavy woods and is practicable in the dry season for horses.

6. Manjuarí-Erguama; direction, northwest.

From a point three-fourths of a mile southwest of Manjuarí a trail leaves the Tierra Entrada trail and runs northwest to the spring Erguama. It is practicable at all seasons for horses.

7. La Harti-Río Jatiguanico; direction, south.

At a point about one-half mile southwest of Manjuarí on the Tierra Entrada trail there crosses a trail from the spring La Harti (one-half mile north) to a series of montes (without names) in the open ciénaga and then to the Río Jatiguanico. This trail is practicable for horses from La Harti to the Tierra Entrada trail. South of here the trail is through heavy woods to the open ciénaga and is very bad.

8. Laguna Bruno-Laguna La Ceiba-La Piedra del Agua-Laguna Hicacos-Laguna Pineda-La Ciruela-Insurrecto; direction, southeast.

From the point where the trail Camino Labirir de la Romana leaves the trail southeast from Manjuarí, the trail runs east one-fourth mile, then southeast three-fourths of a mile to a well south of the trail. One-half mile farther southeast the trail turns south one-fourth mile to a former Cuban camp site. There is a well here which has been carefully filled in with stones. The trail then turns east one-half mile to the Laguna La Ceiba. Up to this point the trail is practicable for wagons and through open grazing land for the most part. From here on the trail is through heavy woods and is practicable for horses. The trail turns south for 1¼ miles, then southeast for one-fourth mile to the spring La Piedra del Agua, which was a former Cuban camp site. The trail then turns north for one-half mile to Laguna Hicacos.

From Laguna Hicacos the trail continues past Laguna Pineda, Cocodrillito, Laguna del Bono, and Insurrecto, the latter a Cuban camp site. After passing the latter point the trail crosses an open grove, a Cuban camp site.

The portion of the trail from Hicacos is practicable for horses during the dry season, but during the rains it can be followed on foot only with great difficulty.

Other camp sites near this trail are: Iglesias, Sebastián, Piedras, and Cayo Perdo.

9. La Harti-Cayo Caña-Cayo Colmena-Cayo Verde; direction, south.

This trail runs south from the spring La Harti, and at a quarter of a mile enters heavy woods and turns southwest. At end of a half-mile leaves the Tierra Entrada trail and turns south for half a mile to a former Cuban camp site, where there are several springs; half-mile farther the trail crosses the Cayo Caña, a former Cuban camp site. It then turns southwest; a quarter of a mile farther on crosses a high monte with a well, which was a former Cuban camp site. One-half mile farther on crosses the Cayo Colmena, turns southeast, and after about 1 mile crosses a monte and a small laguna, a former Cuban camp site; turns northeast and crosses the Camino del Juncal; three-fourths of a mile across to a high monte and camp site. About one-half mile farther on is another monte and camp site, and from here a trail leads north about one-half mile to the Cayo la Plata. Main trail continues south about 1 mile to the spring Sevilla, from which point there is a trail southwest three-fourths of a mile to the Cayo Verde. Trail continues south one-half mile, crosses a monte, and 1 mile farther on another monte near the end of the trail Camino del Juncal. Trail continues south; at a mile and a half crosses another monte and turns southwest about 2½ miles to another monte, where a trail leads west to the Rio Jatiguanico and east to the Ciénaga and Laguna Tesoro. First half-mile of this trail, after leaving La Harti, is across grazing land; it runs through heavy woods to the spring Sevilla, then across open ciénaga; it is practicable for horses for the first mile only.

10. Marcial-El Lindero-Guanito Grande-Cayo Palmar-Camino del Rio trail; direction, south.

This trail runs from the Tierra Entrada trail just east of a palm grove south of the spring Marcial, near Jicarita; southeast three-fourths of a mile to the Laguna Arroz and two former Cuban camp sites. Practicable for horses to this point only. Trail turns southwest for one-fourth mile to the spring El Lindero, a former Cuban camp site. One-half mile farther southwest is the spring Guanito Grande. Halfway between these two springs and to the west is a former Cuban camp site. Two and three-fourths miles farther to the southwest is Cayo Palmar and spring. One mile farther on is the Camino del Río trail. Through open woods to the spring Guanito Grande and then across open ciénaga; not practicable for horses.

11. Marcial-Babiney Secado-La Jumado; direction, southeast.

This trail runs from the spring Marcial, near Jicarita, southwest for one-fourth mile and then southeast one-fourth mile to the spring Babiney Secado, a former Cuban camp site. The trail from here runs southeast one-half mile to the spring La Jumado. From here a trail runs north one-half mile to the spring Landrea. Main trail practicable for horses to the spring Babiney Secado only. From the spring Babiney Secado a trail runs southwest one-fourth mile to the spring El Regino, continuing one-half mile farther southwest to point known as Los Cuatro Caminos and then trail turns south one-fourth mile to the spring La Paila. From Paila a trail turns west one-half mile to the springs La Pailita and Chipi, with former Cuban camp sites. Trails from Pailita run to Jicarita by way of the springs El Bagá and Aserradero. These latter trails are through heavy woods and impracticable for horses.

12. Jicarita-Guamajal-Sabaneton Redondo, and connecting trails; direction, southwest to Guamajal and north to Redondo.

This trail runs from Jicarita southwest one-third of a mile to the spring Don Pedro and continues southwest through heavy woods one-half mile to the former Spanish camp site and Laguna Guamajal. A trail also runs south from Don Pedro, one-eighth of a mile, to a small spring, Federico, then turns southeast one-eighth mile and ends at the spring Los Rayos. Trail practicable for horses; through heavy woods.

A trail runs from a point one-fourth mile west of Sabaneton Redondo, 1 mile south to the spring Los Judíos and a former Spanish camp site; passes a short distance east of the spring Enea. It is practicable for horses to a point near the spring Enea. The trail runs through heavy rocks to this point and from here continues across open ciénaga; is a very difficult trail. One-half mile south of Los Judíos is a former Spanish camp site. A trail runs from Los Judíos south through heavy woods; not practicable for horses.

A trail from Cuban headquarters, one-fourth mile southwest of the spring Los Sapos, runs south one-eighth mile to the spring Regino. This trail turns northwest one-eighth mile to the spring El Guamajal, passing through heavy woods; not practicable for horses. From Guamajal a trail runs north one-eighth mile to the old and abandoned portion of the Camino Entrada trail from Jicarita. A trail from Guamajal runs southwest one-fourth mile to a trail running southeast from Sabana Grande. Southeast 1 mile along latter trail is the spring Perenzuela and 1½ miles farther is the spring Silverio. Here the trail turns southwest one-half mile to the spring Jarico; runs through heavy woods, and across open ciénaga. Not practicable for horses, the part in the open ciénaga being especially bad.

13. Majaguilla (one-half mile west of Laguna Hicacos)-El Lindero-Cayo Verde; direction, southeast.

This trail runs from the spring Majaguilla east one-half mile, thence south three-fourths of a mile to the spring El Lindero. From here the trail runs southeast about 4 miles and crosses the open ciénaga to a monte, where it joins the trail from the spring Iglesias to the Río Jatiguanico and Cayo Verde. Most of this trail lies across the open ciénaga. No part of the trail is practicable for horses.

IN THE CIÉNAGA OCCIDENTAL NEAR JAGÜEY GRANDE.

1. Ingenio Australia-Los Arroyos-Mais (Camino Salchicha); direction, south.

This road crosses the railroad from the sugar mill and turns southwest. At the 1-mile point is the Laguna El Pato, about one-fourth of a mile to the east. One-fourth of a mile to the west of this point is an old Spanish fort and well. At seven-eighths of a mile southwest there is a trail running southeast to the Laguna Tierra Prieta. Half way to this lake there is a well to the right. The Camino Real from La Perla is practicable for wagons to this point.

From here a trail runs southwest 2½ miles to a sulphur spring and Laguna La Estacada. The first half mile is through swampy woods and is very bad, necessitating the greatest care in getting along. The last part of the way is across the open ciénaga. About 2 miles farther south, on the main trail, the trail crosses Arroyo Salchicha, passing through a mangrove (mangle) swamp about 100 yards wide, which follows the course of the stream. Just south of the stream there is a high, former camp site of the Cubans (Los Arroyos) marked by a number of palms. From here there is a trail northeast, crossing open ciénaga for about 8 miles, to a cayo in the open swamp, and from the cayo the trail turns southeast for about 2 miles to Punta de Guamá. The main trail, from the stream, continues southwest for about 1½ miles to Cayo Narcisa, which can be easily recognized by its extent and by the great number of palms growing on it. From here there is a branch trail south for three-fourths of a mile to Cayo Caña. The trail continues southwest three-fourths of a mile to Cayo Eciber and an arroyo of the same name. One mile farther southwest the trail crosses Cayo Jucaral. From here a trail runs southwest, at three-fourths of a mile, crossing the Cayo Almicial, and going to Cayo Micial. One-half mile southwest of Jucaral, on main trail, Cayo Galleta is crossed, and three-fourths of a mile southwest Cayo Infierno is crossed, and from here the trail goes west to Mais. From Mais there is a trail southeast to the Bahía de Cochinos and Laguna Tesoro. The trail to Mais is practicable only for persons on foot. This whole trail is one of the oldest and best known in the Ciénaga. It was used in the Ten Years' War and in the insurrection of 1895–1898. It is known as the "Camino Salchicha."

2. Yuca-El Sapo-Cayo Verde (Camino del Sapo); direction, south.

This trail runs west from finca Yuca three-fourths of a mile to the former permanent Cuban camp site under two large ceiba trees, and passes through heavy woods. It is practicable for wagons at all times. The trail turns southwest one-fourth of a mile to Camino Poma Rosa. From here the trail runs one-half mile southeast to the spring El Sapo and former Cuban camp site. From the latter point the trail runs southwest to Cayo Verde and is known as the Camino del Sapo. Trail from point where it leaves trail from Yuca is practicable for horses to Laguna Poma Rosa and passes through heavy woods. From here the trail is not practicable for horses and passes through woods up to about 2 miles from Cayo Verde, then crosses the open ciénaga. Very hard trail.

3. Yuca-Chu Chu Perla; direction, east.

This trail runs southeast from Yuca for about five-eighths of a mile to the Camino Real from Jagüey Grande where it turns southeast to Chu Chu La Perla, across grazing lands. Practicable for wagons at all times.

4. Camino Poma Rosa-Jicarita; direction, northwest.

From a point one-fourth of a mile south of Camino Poma Rosa, on the Camino Centro, there is a trail running northwest one-third of a mile to the spring Jicarita and former Cuban camp site. Trail from this spring to Yuca. Both these trails are practicable for horses. The former is through heavy woods; the latter across grazing land.

5. Yuca-Laguna Las Avispas-Cayo Verde (Camino Centro); direction, south.

This trail runs southwest from Yuca one-half mile and crosses Camino Poma Rosa; one-fourth mile farther on crosses trail running northwest and southeast. Just beyond this point is a former camp site. About one-third of a mile farther on the trail passes close to Laguna Las Avispas and former Cuban camp site. From here the trail continues southwest about 3 miles to Cayo Verde. This entire trail is known as "Camino Centro." It is practicable for wagons for about the first half mile; for horses to Laguna Las Avispas. The first half mile is across grazing land, then the trail is through heavy woods for about 2 miles and from there on across the open ciénaga to Cayo Verde. It is a very difficult trail.

6. Laguna Poma Roca-Camino Poma Rosa; direction, northwest.

A trail running from Laguna Poma Rosa northwest for about three-fourths of a mile through heavy woods to camp and well just south of Camino Poma Rosa. From this camp a trail leads southwest one-third of a mile to another former insurgent camp site. From this camp site a trail also leads south one-third of a mile to a large spring.

7. Camino Poma Rosa-Media Legua-Cayo Verde; direction. south.

A trail from a point south of Yuca and one-fourth mile south of Camino Poma Rosa runs southeast one-third of a mile to the spring Media Legua. About 200 yards farther on there is a trail northeast for one-fourth mile to a former Cuban camp site with a well. About one-fourth of a mile from the spring Media Legua a trail turns southwest at spring La Yaba. One-fourth mile farther on there is a former Cuban camp site with a small spring 200 yards to the west of the trail. One-fourth mile farther there is a former Cuban camp site to the west of the trail. One-half mile beyond this point there is a small laguna to the west of the trail. One-fourth mile beyond this laguna is a former Cuban camp site and here was situated a hospital and the Cuban headquarters for this part of the ciénaga. There are several wells here. One-half mile farther on there is a large júcaro tree in the open ciénaga. From here there is a trail direct to Cayo Verde. Trail is practicable for horses to spring La Yaba and passes through heavy woods to a point just south of the Cuban hospital. From here the trail continues across open ciénaga. This is a fair trail and was used constantly by the Cubans.

8. Sirena-La Palma-Caña Castilla-La Pailita (Camino La Ciénaga); direction, south.

A road from Sirena, which is on the Camino Poma Rosa, runs about three-fourths of a mile southwest to the springs Prieta, where it becomes a trail, continuing southwest. At a point about one-half mile southwest, where the trail from the spring La Palma joins this trail and distant about 1 mile, was situated a camp. Here there are several wells. One-half mile south the trail passes to the east of a cayo with 4 palms and a good spring and turns west about 300 yards to the spring La Caña Castilla. Trail here turns south for one-fourth mile and then west about 300 yards to the spring La Canoa. From here the trail turns northwest for one-fourth mile to the spring El Cayo; thence south one-half mile to a cayo and the spring La Pailita. This trail is known as the Camino La Ciénaga and is practicable for horses to a point just beyond the spring Prieta. The trail is through heavy woods for about 1¼ miles, then across the open ciénaga. The trail can be easily traced and has the appearance of a small stream. Great care must be exercised in traveling this trail, as small fish holes are found in great numbers.

9. La Yaba-Laguna Gurito; direction, south.

Trail runs south, from point at the gate in the stone fence one-half mile southwest of the spring La Yaba, for about 200 yards to the spring Las Avispas, a former Cuban camp site. Trail here turns east for one-fourth mile to former Cuban camp site and small spring, from which a trail leads northeast for about seven-eighths of a mile to Sirena, and another trail southeast for about a half mile to the Camino La Ciénaga at a point near the spring Prieta. These trails run through heavy woods and are practicable for horses, except the trail to the spring Prieta. Main trail from camp site and spring runs southwest for about one-fourth mile to a small spring, then southeast one-half mile to another small spring and camp site. From here trail runs west for one-half mile, then south one-half mile, then east another one-half mile to the spring La Palma. The trail follows the arroyo which starts at the spring La Guabina and passes the springs Casimba, Morejón, and Estero la Palma, ending at the Laguna Gurito. This trail is one of the most treacherous in the entire ciénaga, on account of the nature of the ground. It is safer to follow the bed of the arroyo through the woods. From the spring La Palma there is a trail to the high camp site one-half mile northeast of the Camino La Ciénaga.

TRAILS NEAR BAHÍA DE COCHINOS.

1. Punta de Guamá-Cayo el Peso; direction, south.

A trail running southwest from Punta de Guamá to Cayo el Peso. About 1 mile southwest of Guamá this trail crosses the trail from Cayo Pañuelo to Cayo Cristo. One-third of a mile southwest of Punta de Guamá the trail passes close to the Laguna Tumbadero. The trail is entirely across open ciénaga and is very difficult.

2. Santa Fé-La Guarita-Cayo Guajaca; direction, south.

A trail from Santa Fé (name of locality, no houses) runs southwest about 2 miles to La Guarita, a large grove of trees. From Santa Fé the trail passes through light woods and across grazing land for the first quarter mile; then through heavy woods for half a mile; last quarter mile across open ciénaga. Practicable for horses in dry season, but at other times the whole country is under water and the trail can be followed only with difficulty and on foot. The trail runs from La Guarita southwest about 1½ miles and then south about 1 mile to Cayo Guajaca, a former insurgent camp site. This part of the trail crosses the open ciénaga; not practicable for horses; very difficult.

3. Cayo Pañuelo-Cayo Cristo-Laguna Tesoro; direction, south.

Trail southwest from Cayo Pañuelo to Cayo Cristo. This trail is across open ciénaga and is very bad. The trail is exceedingly difficult of passage in the wet season, but it can be traveled. From Cayo Cristo around the Laguna Tesoro the trail is not passable in the wet season unless boats are available.

4. Cayo Infierno-Mais; direction, southwest.

This trail is across open ciénaga part of the way and then through heavy woods. It is a branch of the Camino Salchicha; is practicable at all times, though it is very bad in wet season. The trail has the appearance of a small stream in the swamp and can therefore be followed.

TRAILS NEAR BOCA DE BROA.

1. Manadero Chiquito-Río Gonzálo; direction, east.

Trail runs from Manadero Chiquito east about 7 miles to a point where the Río Gonzálo flows into the Río Jatiguanico. About halfway along this trail there is a trail running north about 2 miles to the shore of the bay near the mouth of the Río Jatiguanico, where was situated a former Cuban camp site. These trails are now hard to locate; they have not been in use since the insurrection. They are practicable at all times, though exceedingly difficult.

2. Río Jatiguanico-Infierno; direction, north.

Trail runs north from the Río Jatiguanico about 2 miles to the spring Infierno. This trail is exceedingly difficult to find and is but little known. A trail from the spring Infierno continues north. This trail is not subject to much change during the dry and wet seasons.

3. Río Jatiguanico-Los Pescadores; direction, north.

Trail runs north about 5 miles from the north bank of the Río Jatiguanico, at a point about 1 mile east of Estero Benetez, to the spring Los Pescadores, and from there continues north and northwest. This is a good trail, though exceedingly hard to follow, as it has not been in use since the insurrection. It runs through a heavy mangrove swamp and crosses open ciénaga.

4. Río Jatiguanico-El Lindero; direction, northwest.

This trail runs north from the north bank of the Río Jatiguanico, at the junction of that river with the Río Gonzálo, to the double spring El Lindero, distance 5 miles, and from there continues west. This trail passes just west of Jolongolonsongo and was in constant use during the insurrections. It is easy to follow, but is very hard to get over owing to the softness of the ground. Some of it is through a heavy mangrove growth and much of it is through heavy woods. It was the main line of retreat to Jolongolonsongo during the insurrections.

5. Guayacán-El Júcaro; direction, south.

This trail runs south about 4 miles from the spring El Guayacán to the spring El Júcaro. A trail from here runs south to the spring Infierno. This trail is through heavy woods and then across open ciénaga; also crosses a high open plain. It is one of the worst trails in the entire ciénaga. It was a thoroughfare during the insurrection.

6. Trails near El Guayacán.

A trail runs southwest about three-fourths of a mile from the spring El Guayacán to the spring Las Pelotas; continues northwest from here about 1 mile to the spring Las Nasas; from here southwest one-half mile to the spring El Llanal; from here a trail runs northwest 1 mile to two springs, and from them north to the open country. A trail from the spring El Llanal runs southwest about three-fourths of a mile to a spring. From this spring a trail runs north to the two springs above referred to. There is also a trail running southwest from this spring about 1 mile to the spring Las Nasitas. The latter trail passes through heavy woods and is well sheltered; much used by insurgents in going from point to point unobserved by the Spanish troops along the edge of the swamp. The trail is soft, muddy, and difficult to locate. From Las Nasitas a trail runs south about three-fourths of a mile to the spring La Vaca, and continues south to the spring Manuelulloa. From here the trail runs southeast about 1 mile to the spring El Guayacán. From the spring

El Guayacán there is a trail running south about 1 mile to the spring El Italiano. About 1¼ miles farther south is the spring Los Pescadores. These trails are all in the open ciénaga; they are very difficult to follow; there is little change in their condition during the dry and wet seasons.

7. Los Pescadores-La Guabina; direction, northwest.

Trail runs northwest from the spring Los Pescadores about 1½ miles to the spring La Guabina. From here a trail runs north about 1 mile to the spring Troco de Palma and south about 1 mile to the spring El Salado. These trails are across open ciénaga; they are very hard to locate and to follow; they are the only practicable ways of reaching these springs.

8. Cusco-Quita Fama-La Palma-La Yaba-El Gallo; direction, southeast.

On the trail running southeast from Cusco, and about 1 mile from the edge of the woods, is the spring Quita Fama. Trail runs through woods; soft bottom but practicable at all times. Trail continues south from here about 1 mile to the spring San Sebastián, then south about 1 mile to the spring La Bomba; from there south about 1 mile to the spring Los Carneros; south about 1½ miles to the spring El Estero. From here the trail turns east about one-half mile to the spring La Palma. A trail branches from La Palma northeast about 1 mile to the spring El Lindero, from which place a trail runs south to the Río Jatiguanico and Jolongolonsongo. From the spring La Palma the main trail runs southeast about one-half mile to the spring Andrés. From here, southeast about one-half mile to the spring La Yaba. Trail turns southwest here for about 3 miles to the spring El Gallo. From here a trail branches northeast about 1 mile to the spring Naranjo and continues east about three-fourths of a mile to the spring San Martín. From Cusco to San Sebastián the trail runs through heavy woods and is marshy and hard to get through, especially in the wet season. From San Sebastián the trail runs across open ciénaga to within about a mile of the spring El Gallo, from which point it runs through heavy woods largely composed of mangrove growths with numerous palms. This trail was in daily use during the insurrection and furnished a means of communication with the insurgent stronghold at Jolongolonsongo. In the rainy season it is very bad.

From the spring El Gallo a trail runs southwest about 1½ miles, to a point on the coast west of the Río Jatiguanico. Trail runs through heavy woods for the most part.

9. Cusco-El Panuelo-El Roble-El Cuchillo-Coast; direction, south.

A trail through heavy and marshy woods, to about one-half mile beyond the spring El Roble. From here it runs across open ciénaga, to within 1 mile of the coast, and then through mangrove growths. Bad trail, but can be followed with great difficulty; was used constantly during insurrections.

10. El Tomate-Llanal Chiquito-Coast; direction, south.

A trail from the spring El Tomate, south for about three-fourths of a mile, to the spring El Llanal Chiquito. From here southwest, about three-fourths of a mile, to the spring Periquillo. From here southwest to the coast. This trail runs through heavily wooded country for the most part. It is over very marshy land, and while used more or less it is difficult to follow without a competent guide.

THE CIÉNAGA ORIENTAL.

That part of the Ciénaga de Zapata lying east of a line running northeast from the head of Cochinos Bay is known as the Ciénaga Oriental.

LAGUNAS.

The Ciénaga Oriental abounds in excellent drinking water, which is procured from springs and lakes. The latter seem to be the outlets of the various underground rivers which are believed to flow below this swamp. They are as follows:

Gibersal, Blanquisal.—These two lagunas are situated in the Gibersal cane fields and about 500 yards apart; they are both in heavy júcaro groves and contain excellent water and plenty of fish. Half way between them is a former camp site of insurgents.

Eryanal.—This laguna is about 300 yards square and about 4 feet deep. It has a hard bottom, is covered with lilies, and contains an abundance of fish. The water is excellent, and there is plenty of grazing near at hand. The surrounding ground is fairly high.

Pesquero.—This laguna is about 200 yards wide and 600 yards long. It runs east and west and has an outlet which flows toward Laguna Tesoro. It is from 3 to 4 feet deep and has a soft, muddy bottom; the eastern end is cut off by bushes. It contains excellent water and an abundance of fish, turtles, and ducks. This laguna is hard to approach on account of the large trees growing on all sides. These trees have immense roots above ground and the ground is covered with water. A body of men could build temporary quarters in these roots above the water with little or no trouble.

Asiento Viejo, El Medio.—These lagunas are in cane fields. El Medio is north of Asiento Viejo and connected with it by a small stream; both lagunas have a fringe of trees about them; they are shallow, have hard bottoms, and contain excellent water with an abundance of fish; the approaches are bad. The surrounding country affords excellent camp sites. Asiento Viejo is about 200, and El Medio about 300 yards in diameter.

El Piojo, Aemici.—These lagunas are a short distance from the trail on either side, but are not connected. The former is about 300 and the latter about 100 yards in diameter. They both have hard bottoms, contain excellent water, an abundance of fish and turtles, and are easy of approach. They are situated in heavy woods (mostly júcaro) and afford good opportunities for camps for foot troops.

Laguna de Guanales Nuevo.—There were numerous small camps established on high ground in the vicinity of this laguna. From here fish and turtles, with which the laguna is filled to a remarkable extent, were sent to other camps. A force was kept here permanently for this purpose. The laguna contains excellent water, has a soft bottom, and is about 4 feet deep. It is about 300 yards wide and about 800 yards long. It has an inlet from Laguna Prieto and an outlet in the direction of Laguna Tesoro. It is in the open ciénaga and the Spaniards never succeeded in reaching it.

Miranda.—This laguna is situated in a grove of júcaro trees in the Miranda cane fields. It has a hard bottom, is fairly deep, contains excellent water, and its surface is covered with grass and lilies. It is about 300 yards in diameter; contains a large variety of fish; camp site of insurgents.

Prieto.—This laguna is an opening in the rocks and appears to be part of an underground river. It is about 25 yards in diameter and has a treacherous, rocky bottom. It is filled with a heavy growth of grass and has a surface outlet to Laguna de Guanales Nuevo. Contains excellent water but no fish. Camp site of insurgents.

Prudencia.—This laguna is about three-fourths of a mile in diameter and about 4 feet deep; contains excellent water and an abundance of fish, turtles, and ducks. Crocodiles are also found here in large numbers. It has an outlet which flows toward Laguna Tesoro.

Pancho Caro.—Small spring bubbling from rocks in the center of a small laguna situated in heavy woods; camp site of insurgents; excellent water.

Jocuma.—Small laguna in Jocuma cane fields; about 4 feet deep with rocky bottom; excellent water.

Jucaral.—Situated near Orbea in open pasture lands. From 3 to 4 feet deep with hard bottom; can be crossed on horseback; excellent water; good approaches; good camp sites in immediate vicinity for large body of troops. Plenty of grazing and wood.

La Anegada Grande, La Anegada Chiquita.—These lagunas are situated in heavy woods and near each other, being connected by an arroyo without name. Both lagunas have bad approaches and are filled with grass and trees but have hard, smooth bottoms. Both contain excellent water and an abundance of fish and ducks; crocodiles are also found. La Anegada Grande is very deep and about 400 yards wide and about 800 yards long. There are two arroyos flowing into it. La Anegada Chiquita varies from 4 to 6 feet in depth and is about 150 yards wide and 400 yards long. No good camp sites close at hand.

Flamenco.—About 350 yards in diameter; deep and covered with junco (a tough plant with large leaves). Contains excellent water; bad approaches; hard bottom; situated in grove of trees along edge of cane fields. Good camp sites for foot troops near at hand.

Guanal.—Deep; is filled with holes which are very deep; bubbles up in several places; contains excellent water and an abundance of fish, ducks, and turtles. Crocodiles are found here in large numbers; camp site of insurgents.

Frontera.—About 300 yards in diameter; deep. Contains excellent water and an abundance of fish, turtles, and ducks. Has bad approaches; no suitable ground for camp sites at hand; is situated in heavy woods.

Bagá.—About 50 yards in diameter; soft bottom; not very deep; contains excellent water but no fish; high ground in vicinity; camp site of insurgents situated in open grazing land.

SPRINGS.

The following springs, all of which contain excellent water, are of importance in planning operations in the Ciénaga Oriental.

The springs differ from those of the Ciénaga Occidental in that they are less apt to be muddy, are more generally situated in rocky openings in the ground, and the water is invariably cleaner and cooler.

El Piojo.—Deep hole; apparently an opening of a cave; in heavy woods near cane field; excellent water; unlimited supply.

El Medio.—Small and deep; excellent water, which seems to come from underground river. This spring seems to be the opening of a large cave; rocky surroundings; situated in small grove in open cane field.

Aemici.—Small and deep; excellent water; camp site of insurgents; situated in heavy grove of júcaro trees on high ground.

Prieto.—Small and deep; excellent water; bubbling opening; rocky surroundings; in heavy woods; apparently opening of cave.

Los Paticos.—Small, deep, and rocky; excellent water; among large júcaro trees in cane field.

Palma Amarilla.—Small and rocky; excellent water; camp site of insurgents; situated in heavy woods.

Los Seis Jucarales.—Small and rocky; excellent water; camp site of insurgents; situated in heavy woods.

Hervidero.—Small and bubbling; excellent water; situated in large júcaro grove.

Júcaro.—Small and bubbling; about 20 feet deep; situated in same júcaro grove as spring Hervidero.

La Bartea.—Large and deep; high banks; bad approaches; excellent water; camp site of insurgents.

Martia.—Very deep, clear, and bubbling; about 50 yards in diameter; excellent water and an abundance of good fish; ground in vicinity high; situated in heavy woods; camp site of insurgents.

Lorenzo.—Very deep and bubbling (no bottom found in center at 85 feet); about 50 yards in diameter; excellent water and an abundance of good fish; situated in heavy woods; bad approaches; surrounding ground high.

San Pablo.—Apparently the opening of a cave; large and very deep; excellent water; spring proper has rocky surroundings; during wet season spring is entirely surrounded by shallow laguna; at this time water should be secured for drinking purposes by wading out to the spring; situated in heavy woods.

Manjuarí.—Large and deep; excellent water; surrounding ground high; situated in heavy woods; camp site of insurgents.

San Pedro.—Small and rocky; excellent water; high ground; situated in large júcaro grove to east of trail (San Pedro); camp site of insurgents.

La Piedra Blanca.—Small; excellent water. Near ruins of a Spanish stone fort.

Yamaque.—Deep; excellent water; situated in cane field near Los Tanques.

CAMP SITES.

In the Ciénaga Oriental there are 32 camp sites used by the insurgents during the insurrection of 1895-1898.

1. Camp of insurgents situated in the Gibersal cane fields halfway between Laguna Blanquisal and the small laguna

one-fourth mile north of it; can be recognized by a very large ceiba tree, which marks the high ground upon which the camp was situated.

The insurgents camping here secured water and fish from the lagunas mentioned above. This camp was under the command of Lieut. Col. José Álvarez (a mulatto, now better known by the name "Matagan," which he adopted after the insurrection when he became a bandit, and under which name he was killed). From here small raiding parties went out constantly, but the camp was maintained principally for the purpose of watching the trails leading into and along the ciénaga. This camp was maintained from the outbreak of the insurrection until the Jocuma-Orbea Trocha was established in 1897, when it was abandoned.

2. *Sabaneton de Satirico.*—A large open grove (palms and grass) on Gibersal-Ciénaga trail; on high ground and surrounded by heavy woods. Water for this camp was secured from the Laguna Eryanal. The camp was commanded by Maj. Desiderio Mato and furnished an important point for getting back into the ciénaga when the Cubans were pressed by the Spaniards.

3. Camp of insurgents situated north of Gibersal-Ciénaga trail and some little distance beyond Sabaneton de Satirico. This camp was on high ground in the heavy timber and covered about 5 acres. Trail to the camp was very bad. There are 4 wells in and about the camp. Lieut. Col. Manuel Betancourt was in command.

4. Camp of insurgents on the Sabaneton de Satirico-Cayo Espino trail; situated on high ground; can be recognized by group of about ten large royal palms, of which there are no more in this vicinity. Water secured from an excellent well, 4 feet in diameter and about 12 feet deep. This was a large and permanent camp.

About a quarter of a mile east of this camp, on another trail, is a camp used during the Ten Years' War. The camp is called Los Mangos de Guayabo Blanco. It is on high ground and is clear, except for a small group of mango trees; good water can be secured from a small well. This camp was commanded by Lieut. Col. Jesús del Sur; it was not used during the insurrection of 1895–1898, except by a few individuals from time to time.

5. *Cayo Guanales Nuevo.*—This cayo and the camp which was situated here take their names from the great number of palm (guanal) found on it. It was a permanent camp during the entire insurrection. Rope was made from the palms, and a detachment was kept here for that purpose. The site is high and dry, but the trails are bad. Water was secured from natural wells in the surrounding ciénaga.

6. *Cayos Benitos.*—These cayos, on each side of the trail to the Laguna de Guanales Nuevo, were constantly used as camps by the insurgents. They are high and dry and can be located readily in the open ciénaga by the large number of júcaro trees on them. Water was secured from natural wells near by.

7. There were a number of insurgent camps situated on the high ground around the Laguna de Guanales Nuevo. They were permanent and were never molested by the Spanish. Fish and turtles were secured and prepared for shipment and sent to the other insurgent camps and strongholds. A large supply was always kept on hand. Water was secured from the laguna.

8. A camp of insurgents was situated about a half mile north of Cayo Majagua, in the heavy woods along the Yanal de Laguna Prieto. This camp site is about 400 yards square and has an abundance of good grass for grazing; water was secured from a spring in Cayo Majagua. It was a permanent camp.

9. Camp of insurgents at Laguna Miranda in the Miranda cane fields. It was an outpost and observation camp, and the large júcaro trees around the laguna were used as lookout towers. From these trees a good view of the surrounding country can be obtained. Water was secured from the laguna. Camp was abandoned when the Jocuma-Orbea Trocha was established.

10. Camp of insurgents in Cayo Laguna Prieto. An outpost camp for the larger camp near Laguna Prieto.

11. Camp of insurgents near Laguna Prieto when Jocuma-Orbea Trocha was established; was not occupied long before the Spanish troops drove them out; water from the laguna. After the Cubans were driven away from the Laguna Prieto camp no insurgents camped there for some months; then Lieut. Col. Gregorio Álvarez established a per-

manent camp east of the former one, deeper in the heavy woods and on a high clearing about 200 yards square. He also established a second camp still deeper in the woods in the center of an almost impenetrable júcaro grove. Here can be seen the remains of 10 native houses; mangoes, oranges, and lemons grow here; water for both these camps came from the Laguna Prieto. At a later period Gen. Pancho Pérez established his headquarters for this section on some high ground near the open ciénaga. Here he built a hospital, and the remains of a number of houses can still be seen. This ground is always dry. Water was secured from the Laguna Prieto and from the Yanal de Laguna Prieto. Doctor Caneda was in command of the hospital.

12. An insurgent supply camp was established in Cayo Majagua early in 1896. The trails to this cayo are bad; a large quantity of supplies was kept on hand here, but the camp does not appear to have had any military importance. There is an excellent spring, and the center of the cayo is always dry.

13. Cayo de los Negros was used from time to time as a refuge when hard pressed and as a resting place for parties crossing the ciénaga, but there was no permanent camp. The cayo contains an excellent spring.

14. *Cayo Palma.*—In this cayo a permanent camp was maintained and a stockade was erected to prevent the Spaniards from securing control of the ciénaga crossing to Jequí, although nothing shows that the Spaniards ever attempted to penetrate the swamp here any more than at any other point. The cayo is large, dry, and has an excellent spring.

15. *Cayo Miguel.*—This cayo is high and dry and can be recognized by the large number of palms growing there; insurgent camps were maintained from time to time. Water was secured from natural wells in the open swamp.

16. *Cayo Pancho Caro.*—In this cayo, which is very large and dry, were four insurgent camps under Ignacio Pérez Fundora. The cayo can be recognized from a distance by a number of large júcaro trees growing on it. It was a refuge camp and was never reached by the Spaniards. The remains of many houses can be seen. Water was secured from natural wells in the open ciénaga. About a half-mile to the west of this point the insurgents established a prison on

Cayo Verde; this cayo is high and dry, but has no water. The trails to it are very bad. About a mile to the east of Cayo Pancho Caro was a small insurgent camp on the banks of the Laguna Pancho Caro. In this camp rope was made during the entire insurrection; the camp was never molested.

17. In 1895 an insurgent camp was established at the spring Los Seis Jucarales and was maintained until the Jocuma-Orbea trocha was established, when it was abandoned.

18. *La Bartea.*—An insurgent camp was situated on the high banks of this spring; here were stationed men who took messages across the Buena Vista trail, and several guides. The approaches to the camp are bad; it was abandoned when the Jocuma-Orbea trocha was established.

19. A large insurgent camp was established near Orbea early in the insurrection by Gen. Pancho Pérez; he erected a low stone wall across the road and had trenches dug. Later the camp was commanded by Maj. Desiderio Mata, and late in 1896 Lieut. Col. Benito Socorro assumed command. He was defeated and driven back by the Spaniards in January, 1897, when they began work on the Jocuma-Orbea trocha. He retreated to the spring Martia and established a camp, but in March the Spaniards made arrangements to attack him and his force broke up and retreated through the swamp.

20. *El Mangal de Managuaco.*—This was one of the largest insurgent camps in this part of Cuba. It was situated in a large mango grove about half a mile east of the sugar mill Covadonga. There is an excellent well; room for a brigade to camp on the high ground; plenty of wood and grazing near at hand. This camp was established by Gen. Pancho Pérez and later, when it was much smaller, was commanded by Colonel Clavero and Maj. Desiderio Mato. The camp was abandoned when the Jocuma-Orbea trocha was established.

21. A large insurgent camp was established along the banks of the Arroyo Semguiro near a ford marked by two large palms close together; the camp was on the high banks; water was secured from the arroyo. The Cubans maintained a very large force here at all times. The commanders of this camp were: Gen. Pancho Pérez, Gen. Joaquín Rodriguez, General Lacret, Gen. Perico Díaz, Gen. Avelino La

Rosa, General Ropesa, and General Miró, who came from Colombia, South America.

There were two severe fights at this point, one in 1895 and one in January, 1898. In the first fight General Molino commanded the Spanish troops and was almost captured. He retreated and the camp was not attacked again until January, 1898. In this fight the Cubans were completely routed and retreated to the open ciénaga by way of the Lagunas Anegada Grande and Chiquita. Here they endeavored to make a stand, but to no purpose.

22. The insurgents established a camp early in the insurrection on the banks of the Laguna Guanal and maintained it until it was broken up by the Spanish troops in 1897. The camp does not appear to have been very important; water was secured from the laguna.

23. *La Cejel Bagá.*—This was an insurgent camp established early in the insurrection by Ignacio Fundora; water was secured from the arroyos El Jibara and Bagá. The camp was on some high ground, about 400 by 800 yards; it was never molested. Cubans recovering from wounds were brought to this point. There was also a camp at Laguna Bagá. It was on some high, grassy ground. Fever patients were sent to this camp to recuperate. Water was secured from the laguna.

24. There was an insurgent camp at Jagüey de Salvial during 1895 and 1896, but it was later abandoned; water was secured from an excellent well; there are 3 houses here which were used by the insurgents.

25. *Orca.*—Permanent insurgent camp was situated at this point. Abandoned in 1897. The camp was on some high ground about half a mile square; water was secured from the Arroyo La Orca; wells were also sunk; the ruins of several houses can be found. To this camp came outsiders and those Spaniards and Cubans in the Spanish service who desired to present themselves to the Cubans. There was also a large prison at this point.

26. *Cayo Ocuje.*—Permanent camp and base of supplies established here in 1895 by Capt. Ignacio Pérez Fundora; the camp was in a palm grove; water was secured from the

Arroyo Ocuje. Insurgents crossing the swamp camped here and secured supplies.

27. An insurgent camp was established at the spring San Pedro by Gen. Pancho Pérez, but was not occupied very long; water was secured from the spring.

28. *Cuchilla Buena Vista.*—A permanent camp was established here in 1895. It was commanded at different times by Gen. Pancho Pérez and Benito Socorro and by Desiderio Mato.

When, in 1898, the Cubans were driven back into the ciénaga they came to this camp; water was secured from natural wells in the open ciénaga. The camp was never molested; it controlled the Buena Vista crossing of the ciénaga.

29. Insurgent camps of little or no consequence were also established from time to time on the following cayos: Butaco, Rabón, and Caoba. The last named was the most used. Water was secured from natural wells in the open ciénaga.

30. The insurgents established a camp near the spring Manjuarí, but it was broken up by the Spaniards when the Jocuma-Orbea trocha was established.

31. An insurgent camp was established at the Laguna Aemici, and here sugar was made from cane obtained in the near-by fields. Water was secured from a spring. Lieut. Col. José Álvarez was in command of this camp, which was broken up by the Spaniards when the Jocuma-Orbea trocha was established.

32. An insurgent camp was situated at the spring Palma Amarilla, and from this camp raiding parties did great damage in the surrounding country until the camp was broken up when the Jocuma-Orbea trocha was established.

ROADS AND TRAILS.

In the Ciénaga Oriental there are eight well-known trails, most of which were used constantly during the Cuban wars.

1. Gibersal-Sabaneton de Satirico; direction, west.

A wagon road leaves finca Gibersal in a westerly direction through cane fields. At one-fourth mile the Laguna Gibersal is north of the road; 800 yards farther on Laguna Blanquisal lies to the south of the road. At three-fourths mile Laguna

Frontera and Laguna El Piojo are to the north. A spring is passed 300 yards beyond the laguna. Just before reaching the spring the cane ends and heavy woods begin on both sides of the road. At one-fourth mile beyond spring the wagon road ends and two horse trails branch—one south through heavy woods for 1¼ miles, to Laguna Aemici; the other runs northwest.

One-half mile along latter trail an open grove is crossed called Sabaneton de Satirico (palm trees and grass), one-half mile in diameter. From this grove a trail runs north.

The main trail leaves the grove in a northwesterly direction and then turns west. This portion of the trail is bad. About three-fourths mile from turn in trail a short branch trail runs north to high ground, on which are several wells. Two and one-half miles beyond, the trail comes out of heavy woods and enters swamp. At this point the Camino Ciénaga runs northeast to Orca and southeast to Cayo de los Negros. This trail was used by raiding parties during the insurrections as a branch of the Camino Ciénaga.

2. Sebaneton de Satirico-Laguna Pesquero-Laguna Bagá; direction, north.

This trail runs north from Sabaneton de Satirico, through heavy woods. Horses can travel over it. At one-half mile Laguna Eryanal is passed to the west of road. One mile farther this trail turns northwest. A short distance beyond this change of direction a branch trail runs north for one-fourth mile to a camp site and well. The main trail continues northwest past the west side of Laguna Pesquero, through heavy woods. Trail suitable for horses. The main trail passes Loma de Cedro and crosses three small streams rising in Laguna Pesquero. These streams unite and form Arroyo Guayabo Blanco. The first and third streams are about one-half mile apart. Halfway between these streams a difficult trail branches north to Laguna Pesquero, distance three-fourths mile. It is impassable for horses. From point where last trail branches, the main trail continues northwest through heavy woods to Cayo Espino, 5 miles distant, the last half mile crossing open swamp. Halfway on this 5-mile stretch, Arroyo La Orca is crossed. Horses can not pass over this portion of the trail. Another trail runs west from Laguna Pesquero to Orca and is impassable for horses. At point where this latter trail turns west to Orca from Pesquero another trail runs northeast, past Laguna Bagá, to Galleón. This is passable by horses.

3. Rosario-Laguna Medio-Laguna Aemici-Cayo Guanales Nuevo-Laguna Miranda; direction, southwest.

A wagon road runs south from Colonia Rosario for about a mile through cane fields and passes Laguna Asiento Viejo, which is north of the road. A short distance farther to the north is Laguna El Medio. Road turns southwest near these lagunas for about one-half mile and then northwest for about one-half mile. The road passes the spring El Medio. Road turns southwest here for about three-fourths of a mile to Laguna Aemici. A trail runs north from near the laguna to the Gibersal-Ciénaga trail. At Laguna Aemici cane ends and heavy woods begin along both sides. The main road continues southwest about one-half mile, passing Laguna Aemici, south and El Piojo, north. Road continues southwest and becomes a trail for horses for about one-fourth mile from end of road. Here trails branch west and southeast; trail to the west runs about 3 miles to Camino Ciénaga, passing Cayo Guanales Nuevo. Just beyond this cayo open ciénaga commences and the trail is impassable for horses. One-fourth mile farther trail passes between the Cayos Bonitos, one to left and one to right. About one-half mile farther, trail reaches Laguna de Guanales Nuevo and turns around the south side of this laguna to the Camino Ciénaga. A trail suitable for horses runs to the south from Laguna El Piojo, passing through heavy woods for about 1¼ miles to Cayo Majagua and crossing the Yanal de Laguna Prieto and a camp site. Last one-fourth mile before reaching Cayo Majagua this trail runs across open swamp. A trail for horses runs northeast from Cayo Majagua to the wagon road from finca Rosario. About one-half mile along this trail was situated a Cuban hospital; one-fourth mile farther on is the spring Prieto; a little farther on is Laguna Prieto; just beyond this, trail crosses the Cayo Prieto; one-half mile beyond this point, woods end and trail becomes wagon road across cane fields. About one-half mile farther on is Laguna Miranda.

4. Jocuma-Cayo de los Negros-Jequí (La Entrada de los Guaniyales); direction, southwest.

This trail becomes impassable for horses at a point about one-half mile southeast of finca Jocuma. The trail, after leaving wagon road, runs southwest for about 4½ miles to Cayo de los Negros, then for about one-half mile through heavy woods and then across open swamp.

From Cayo de los Negros two trails to Cayo Verde run across the open swamp; impassable for horses; one direct to the north and the other to the northwest by way of Cayo Miguel, thence northeast to Cayo Verde. From Cayo de los Negros a bad trail (the main trail) runs southwest about 2 miles to Cayo Palma. Halfway along this trail is a branch trail which runs to Laguna Prudencia, situated northwest of the trail. From Cayo Palma the main trail runs west across open swamp to Jequí, by way of Cayos Butaco, Sierra Morena, and two small cayos situated near La Piedra del Agua. This main trail is the best known of all the trails through the swamp which were used by the Cubans during the uprising of 1895–1898. It has long since been abandoned and is exceedingly hard to locate and difficult of passage.

5. Jocuma-Pancho Caro-Prieto; direction, west.

This is a trail suitable for horses and runs southwest from finca Jocuma for three-fourths of a mile through cane fields to heavy woods. Here the trail, no longer suitable for horses, turns more to the south for about three-fourths of a mile to open swamp. One-fourth mile before reaching open swamp Laguna Pancho Caro lies to the north of trail. Just beyond this laguna the trail turns to west for three-fourths of a mile to Cayo Pancho Caro; the trail here turns northwest for about one-half mile and connects with a trail which runs south one-half mile to Cayo Verde; the latter is impassable for horses. Main trail runs north through heavy woods to spring Prieto, passing north of the spring. This part of the trail is not suitable for horses.

6. Jocuma-Orbea; direction, southeast.

An old public road running southeast from finca Jocuma for about 1½ miles. A narrow-gauge railroad runs along north side of road for about a mile. About one-fourth mile from Jocuma the trail passes ruins of a stone fort [which marked beginning of trocha], and spring Los Paticos to south. About three-fourths of a mile farther on, the spring Palma Amarilla and former Cuban camp site is to the south in heavy woods.

About one-fourth mile farther on the spring Los Seis Jucarales and former Cuban camp site lies to the north a short distance, in the woods; just beyond this point are the ruins of a stone fort. From this point a trail runs southwest to the springs Hervidero and Júcaro; not passable by horses. Main trail passes ruins of old stone fort lying to north of road. One-half mile beyond this fort the wagon road ends. The main trail, not passable by horses, continues south through very heavy timber for one-fourth mile to Orbea. Here a trail runs southwest one-fourth mile to the spring La Bartea and former Cuban camp site. From Orbea a trail runs southeast about one-half mile; about one-fourth mile along this latter trail is a stone wall built on each side of road and at right angles to it; built by Cubans; camp sites here. From point above mentioned, where wagon road ends, trail runs north to wagon road which leads to the sugar mill Covadonga.

7. *Cayo de los Negros-Orca-Cayo Espino-Cayo Iola-Ensenada trail (Camino la Ciénaga); direction, northwest.*

This trail passes entirely through open swamp, running northwest from Cayo de los Negros for about 6 miles, to a point where the Gibersal-Ciénaga trail meets it at edge of open swamp. This part of the main trail passes near Laguna de Guanales Nuevo (where main trail connects with a trail to finca Rosario), and a little farther north it crosses the arroyo which serves as an outlet to this laguna.

At the point where the trail from the finca Gibersal joins it, the main trail turns northeast for about 4 miles to Orca, where it crosses the arroyo La Orca and also a trail running east and west; main trail turns northwest for about $1\frac{3}{4}$ miles and then northeast to Cayo Espino. This trail was constantly used by the Cubans, but is very hard to find now. It is known as "Camino la Ciénaga."

8. Galleón-Orca-Cayo Isla; direction, southwest.

A wagon road runs southwest from Colonia Galleón through cane fields for about one-half mile. Here a trail runs west for about 3 miles to Cayo Espino and is very old and important. This Espino trail crosses the arroyos Bagá (2) and the arroyo El Jíbara, also the former Cuban camp site La Cejel Bagá. From point where wagon road ends and Espino trail branches, the main trail continues southwest about 1½ miles. It is practicable for horses. About halfway along this main trail, trails branch southeast to Laguna Bagá and northwest to the former Cuban camp site La Cejel Bagá. Main trail turns northwest for one-third mile and then southwest for about one-half mile to the former Cuban camp site Jagüey de Salvial. Main trail continues southwest about one-half mile and then turns west one-half mile to former Cuban camp site Orca, and from there runs west across open swamp to Cayo Isla. Exceedingly difficult trail to locate; hard to travel over.

JOCUMA-ORBEA TROCHA.

Along the northeastern edge of the Ciénaga Oriental the Spaniards constructed a trocha. It was built during the months of January, February, and March, 1897. It ran from Jocuma southeast, along the old Camino Real to Orbea, and from there northeast to Palma Larga. There were 6 stone forts (all now in ruins), situated as follows:

One just south of Jocuma; one about a mile farther south, at the point where the trail for the springs Hervidero and Júcaro leaves the Camino Real; one a little farther to the south; two at Orbea; and one at Palma Larga.

Up to this time the Cubans had controlled this section of country and no Spanish column had succeeded in driving them out of their strongholds, but with the establishment of this trocha conditions were changed and the Cuban power was broken.

This trocha controlled the main thoroughfare for insurgent troops in this part of Cuba, and its moral effect was very good, as it compelled the insurgents, who up to this time had been going about openly, to retreat well into the ciénaga, where they could do little or no harm.

The main object of this trocha was to control the trails across the ciénaga and to the Bahía de Cochinos, which start from here or near-by points, and especially the Buena Vista and Cayo Palma-Jequí crossings.

THE BAHÍA DE COCHINOS.

In considering the Ciénaga de Zapata, both Occidental and Oriental, as a field of possible operations, the Bahía de Cochinos must be taken into consideration, as on it would be situated the southern base of operations.

In general, the west coast of the Bahía de Cochinos is low and marshy, although there is a ridge of fairly high ground close to the bay. The north coast is somewhat higher and the east coast is, for the most part, from 10 to 30 feet above the beach. This is especially true of that part of the coast from Gallinas south. The west coast has little in the way of trees aside from the mangle, but along the north coast there is an abundance of material for charcoal. The entire east coast is covered with a great variety of excellent timber. It is from this coast that the great shipments of valuable timber are made. The timber belt extends well around the head of the bay from the east.

No fresh water can be procured along the west coast until the head of the bay is reached, while along the north and east coasts it is plentiful.

For large vessels entering the bay the best channel is from a point about half a mile west of Punta Oriental to a point about halfway across the bay from Punta Oriental to Punta Mogote del Padre. Large vessels should not attempt to enter west of the point stated. The channel up the bay is safest about three-fourths of a mile from the east coast. There are no currents to be encountered and the tide is from 18 to 23 inches.

DESCRIPTION.

A general description of the coast line is as follows:

The Bahía de Cochinos extends inland in a general northerly direction between the headlands Punta Mogote del Padre on the west and Punta Oriental on the east.

Punta Mogote del Padre is a blunt point. It is sandy, with a narrow ridge of ground back of the beach, about 6 or

8 feet higher than the beach. The ridge is about 50 or 100 yards wide and then the ground drops again and becomes very marshy. This marsh is covered with salt water most of the time. The mud is extremely hard to get through because of its sandy character. There is very little water on the beach, and a boat drawing 5 feet would have to anchor about 500 yards off the shore.

Just north of this point is the Estero Mogote. This is a shallow inlet and a small boat not drawing more than 6 feet can come within about 200 yards of the shore. There is a small, high grass plot about 8 feet above the beach. No fresh water near at hand.

Going along the west coast of the bay, the next point of land is Punta Las Mabajas. This is a small, high, wooded point. There is no fresh water near at hand, but a camp could be established if arrangements could be made to bring water in boats. When the wind blows in from sea it is impossible to land. The best landing place is just south of this point, but there is very little water. Even small boats must remain well out from shore.

Playa Los Cocos is about a mile north of Punta Los Mabajas. This is an excellent beach, but the bay is shallow. However, a small boat can come in fairly close to the shore. The playa takes its name from a few cocoanut trees which grow here; the ground back of the beach is high but not wide.

Punta Cazones is a sharp point which juts out noticeably about halfway up the west coast of the bay. There is a small bayou south of the point and a larger one north of it. The former can be approached to within about 300 yards by a boat not drawing more than 7 feet. The latter offers a fairly good shelter for small boats when the wind is from the south. The point is heavily wooded and is higher than the coast on each side of it. About 3 or 4 miles north of this point is the Playa Entrada Cazones. From here there is a trail southwest to Cazones, which is very bad, and one leading north along the coast. There is a narrow-gauge track going inland for about 300 yards; the beach is open and smooth; there is deep water to within 150 yards of the shore; no rocks on the bottom.

About a half mile north of Playa Entrada Cazones is a crescent-shaped beach about three-fourths of a mile long. At the south end of this beach is Punta Guanival, a small and unimportant point. At the north end is Punta Palizada. This is a large and high headland, which commands an excellent view of the coast for some distance.

Halfway between the points at each end of the crescent is the Playa Tienda Vieja. This was formerly the most important charcoal shipping point on the bay, but its inaccessibility in the way of trails and the fact that vessels received the full benefit of the storms from sea caused the company controlling the charcoal depots along the coast to abandon it. Nothing now remains save some old ruins. There was no water here; it was brought from Playa La Caña. It is a fair landing place; the beach is free of rocks, and there is 8 feet of water to within 60 yards of the shore.

About 2 miles farther up the coast is Playa Río Negro. This is the largest shipping point for charcoal on the bay; there is no fresh water; all water for drinking and cooking is brought from the Playa La Caña in a water boat; there is deep water with smooth bottom to within 75 yards of the shore; at 200 yards from the shore there is 30 feet of water. Boats anchoring here receive the force of storms from the sea, and great care must be exercised to guard against their being driven onto the beach.

About 1½ miles north of Playa Río Negro is the Río La Caña, with a good landing west of the river. Here there is an iron tank, capacity 100 barrels of water, situated in a native house built to protect it. The water is piped from La Criolla, is excellent, and is used as a supply for all boats entering the bay. A water boat also takes water to the different charcoal depots along the coast. At this point there is an excellent anchorage, and at 100 yards from shore there is 30 feet of water. The beach is smooth and there are no rocks. The river has been converted into a canal and is closed at its mouth by means of a lock with two gates. There is a bar at its mouth which effectually closes it even to loaded charcoal barges.

Just south of here is the Playa Manatí. This playa is around a small point from Playa La Caña and could be utilized in case it was desired to land a force to attack Playa

La Caña. There is a good beach, but boats drawing over 20 feet of water would have to remain a half mile out from shore. There is about 10 feet of water to within 50 yards of shore.

At the head of the bay is the Río La Puente. At its mouth this river is known as the Río Oriente. The river, which alternates with a canal for about a mile, has a depth of from 6 to 10 feet. Beyond this point it is very shallow and flows through small trees (mangrove). There is a bar off the mouth on which there is about 2½ feet of water.

At 100 yards from shore there is 12 feet of water; at 200 yards, 20 feet; and at 300 yards, 40 feet of water; anchorage, fairly good.

About a quarter of a mile east of the above river is the Caleta de Ventura. This is a bayou about 300 yards long and 150 yards wide. At its head it narrows to a point, and from a cave, formed by an overhanging ledge of rock, there flows an underground stream. The water from the stream bubbles up to the surface and is very black. The mouth of the bayou is about 25 yards wide. There is a wide bar across the mouth having only 3 feet of water on it. The bayou inside is very shallow. At 300 yards off the bar there is 8 feet of water, and from here to the bar the water averages from 3 to 8 feet. The Caleta de Ventura is surrounded by low, marshy ground (mangrove), except on the west where the soil is sandy and dry.

On the west side a well-worn trail, about 40 yards long, leads to a natural well, about 8 feet deep, situated on a small, high, rocky plateau. Back from here a short distance are 2 houses.

The Playas Almendera, Larga, and Pesada are along the coast southeast of the Caleta de Ventura at regular intervals of 200 to 300 yards.

Playa Almendera is just north of a small point which is heavily wooded and can be readily recognized. These playas all afford good landing places for small boats; boats drawing up to 30 feet can approach within 300 yards of shore. The anchorages are all excellent.

The point just north of Máquina, Punta Potrero, controls the coast on each side, and a small body of men intrenched at this point could successfully defend the landing against a much superior force.

A short distance along the shore from this point and just north of La Boca del Río Santa Teresa is the Playa Los Ornos. This playa is small and crescent shaped. It is protected at all times and is an excellent landing; about 8 feet of water to within a short distance of the shore and 30 feet 300 yards out.

La Boca del Río Santa Teresa is a sharp bayou or inlet just north of Máquina. This inlet extends inland about 300 yards to a point where there is a very large cave in the rocks which form the surface. The water comes up out of this cave with great force and it is very deep.

At Máquina there is a narrow-gauge railroad line but no engine. At the terminus of this road on the south side of the beach, which is long and crescent shaped, there is but 18 inches of water at 15 yards from shore. The best landing at Máquina is on the north or west side of the beach. Here the banks are high, perpendicular, and of hard clay. As there is from 5 to 8 feet of water with a smooth, sandy bottom from a point 200 yards offshore right up to the banks, this is an excellent place to land supplies. Three hundred yards offshore there is 20 feet of water and 400 yards out 50 feet. This part of the bay is well sheltered and the water is invariably comparatively calm.

Just below Máquina is the spring Galleta with a trail leading inland about a mile and a half to a small lake. This spring contains excellent water and is on high ground. Just beyond this spring is the Laguna Jagüey Bonito. This lake is very small and during the dry season it becomes a mud hole. The water is slightly salty.

About a half mile beyond the spring Galleta is the Playa Mangle, and about a mile still farther to the south is the Playa Patricio. Near the Playa Mangle is the Laguna Mangle. The shore is high here, and although the lake is close to the bay it is only slightly brackish and the water is suitable for animals. The lake takes its name from the mangrove (mangle) growth in which it is situated.

About 100 yards back from the Playa Patricio is a spring containing excellent water and known as the spring of Patricio. It is reached by means of a well-worn trail which leads over a slightly rocky ridge and through heavy woods.

Near the Playa Patricio is the Laguna Agua Dulce; this lake is small and is very salty.

About a half mile south of the Playa Patricio is Gallinas. Here there is an excellent landing on a small sandy beach and good water for drinking can be obtained. There is 8 feet of water 40 feet off shore; from this point to shore the bottom is sandy. Seventy-five yards off shore there is 18 feet of water, and at 150 yards there is 40 feet of water with only an occasional rock.

Just south of Gallinas is the Playa Clovijinos, with a house and a well. This playa was an insurgent camp site. There is an excellent landing for small boats. The beach is rocky and forbidding from the bay, but upon approaching closely in a small boat, small stretches of sandy beach can be located, each about 12 or 15 feet wide. Fifty yards off shore there is 15 feet of water; at 100 yards there is 25 feet; and at 200 yards, 60 feet.

About a mile south of here is a prominent point known as Punta Avalo, from which a good view of the coast can be obtained.

About 4 miles farther south is the Caletón Rosario. Halfway to this bay is the Caletón Avalo. This is a shallow inlet of no practical use.

At Rosario, on the inlet of the same name, is an excellent landing with a covered wharf. There is no bar at the entrance to this inlet, and boats drawing 18 feet can tie up at the wharf. Just outside the entrance to the inlet the bay is very deep.

Below Rosario there are two small points having no names, and beyond these are the points Punta Ocuje and Punta Ceibita. These are both heavily wooded and would serve as good landing places for small boats. A large vessel can anchor along here about 250 or 300 yards from shore.

About 3 miles down the coast from Rosario is Playa Perdice, a small crescent-shaped beach with good wells. The southern end of the beach is known as Punta Perdice, and here was situated the Spanish Fort Perdice. This is sometimes called Punta Piedras. Playa Perdice is an excellent landing place for animals or supplies. There is a good-sized sandy beach, and this part of the bay is generally calm. At 8 yards from shore there is 8 feet of water; at 25 yards there is 12 feet; at 100 yards there is 30 feet; beyond this the bay is very deep.

About 2½ miles beyond Perdice is Punta Oriental. This point is sometimes called Morales. It marks the eastern end of the Bahía de Cochinos. It runs well out into the sea, is heavily wooded, and commands an excellent view of the sea in all directions.

Along the coast to the east, about 4 miles, is the Caleta Buena. This is a long inlet and it can be entered by boats drawing not more than 12 feet of water. The upper end is treacherous and has many rocks. There is a good landing place with a trail running inland.

About 3 miles southwest of Punta Mogote del Padre, on the west coast of the bay, is Punta Palmillas. Beyond this is an opening about half a mile wide and then Cayo Miguel.

The long inlet north of Palmillas and Cayo Miguel is known as Bocarón del Palmillas.

West of Cayo Miguel there is another inlet and beyond it Cayo Blanco del Sur. The east end of this cayo is Punta Cayo Blanco. The long estero north of Cayo Blanco del Sur is known as Estero Palmillas, and the channel south of it is known as Estero Pino. This estero also extends west and northwest of Cayo Blanco del Sur.

The land from Punta Mogote del Padre to Punta Palmillas is low and marshy. It is almost entirely composed of mangrove (mangle) swamps.

Cayo Miguel consists of low, sandy, marsh land. On this cayo nothing grows but mangle.

Cayo Blanco del Sur is about the same as Cayo Miguel except that there are one or two high points and on them fishing shacks have been erected, but there are no points suitable for permanent houses, and there is no fresh water near.

The Bocarón del Palmillas and the channel leading to it are both very shallow. A half mile off Punta Palmillas there is but 8 feet of water and from this point to the shore the depth varies, being only a foot or two in some places.

Between Cayo Miguel and Cayo Blanco del Sur there is a channel about 10 feet deep, but it is very hard to follow. This channel extends through the Estero Palmillas and enters the Estero Pino west of Cayo Blanco del Sur.

SETTLEMENTS.

Along the Bahía de Cochinos, more especially on the eastern and northern shores, are a few scattered settlements.

Playa Perdice.—At this point there is a frame house of four rooms, three native houses, and a good barn which will shelter 10 animals. These houses are on high ground back of the beach, which is small, sandy, and crescent shaped. There are two wells near the main house, both of which contain excellent water; supply practically unlimited. At the place is a flat-bottomed boat, which will hold 15 to 18 men comfortably. At 8 yards from shore there is 8 feet of water; at 25 yards, 12 feet; and at 100 yards, 30 feet. Large vessels can anchor with safety. There is a horse trail to Rosario. The trail is bad on account of the great number of stones in it and the holes in the surface rock. There is a wagon road running northeast to Laguna Palmal and to the excellent spring of the same name. It runs along the coast through high wooded country to Playa Jirón and from this point goes into the interior. Much valuable timber is cut in the vicinity of Laguna Palmal and shipped from Playa Perdice.

Rosario.—On the south side of Rosario Inlet, which is the only inlet along the bay navigable for small boats. It is an important shipping point for lumber. There are 7 frame houses and a small grocery store. The main building could be used as a hospital and would hold from 20 to 30 beds. At the head of the inlet are 2 native houses. Near the head of the inlet are 2 wells each of which has a hand pump. One contains excellent water and has a tank holding 500 gallons. Water from both is piped to the main houses. One used for drinking water, the other for washing. At this point there is a small sailboat, a flat-bottomed rowboat, and an alcohol launch. There is a small, solidly built, covered wharf with 19 feet of water and there is not less than this depth out to the open bay. There is a road to Playa Perdice and a road from the head of the inlet to Ondones and thence to the interior. Horses can be ridden over the latter road.

Gallinas.—Contains 10 houses and a general store and has a population of 65. There are 2 wells, and both contain the best water to be found along the bay. One well is about 60 feet deep and has 36 feet of water. At this point there are 2 flat-bottomed barges which draw about 9 inches of water and will each hold 20 men. There is also a small flat-bottomed boat. The landing place is a sandy beach; 15 yards from shore there is 8 feet of water; at 50 yards there is 18 feet, and at 150 yards, 40 feet of water. A horse trail runs to the interior by way of Rosario Inlet.

Playa Clovijinos.—On the coast about 150 yards south of Gallinas. Has a house and a well. The well is about 100 yards from the shore in an open field. Contains excellent water.

Máquina.—Situated near the head of the bay and contains 6 houses and a small grocery store. Water is obtained from two wells, one of which contains excellent water, while the other is not so good. This place would be the base for any operations in the immediate vicinity of Laguna Tesoro. There is a narrow-gauge track running to Suplial. It has 4 flat cars. Máquina does not afford a good landing place. The beach is long and crescent shaped, with the railroad track running to the southern end, and here there is very little water. There is a large sailboat and a small rowboat. Supplies could not be brought within less than 50 yards even in a rowboat. Vessels bringing supplies would have to anchor about a quarter of a mile out, where there is 50 feet of water; 300 yards from shore there is 20 feet of water, and from here in it gets shallow. From a point 200 yards from shore to the high perpendicular banks on the northern end of the beach there is from 5 to 8 feet of water. Large vessels can not anchor at the head of the bay with the same safety that they can anchor lower down, as they are apt to drag anchor.

There are roads to Gallinas, to Suplial, and around the head of the bay to Río Negro. The road to Suplial is fairly good as the railroad line forms most of the trail and the roadbed has been raised. Horses can be taken over the road at all times. From Suplial there is a good wagon road to Santa Teresa. The trail around the head of the bay is practicable for horses at all times, but great care must be used as there are numerous holes in the rock surface.

Ventura.—Consists of 2 houses with an excellent natural well.

Río Oriente.—At this point there is no fresh water.

Playa La Caña.—At this point there are 4 houses, one of which contains an iron water tank which has a capacity of 100 barrels. This tank is kept full of water brought from a spring in the rocks at La Criolla. The water is excellent, and all vessels coming into the bay depend upon this place to get their fresh-water supply. There are 6 flat-bottom barges, each of which draws about 9 inches of water and will hold 20 men. There is excellent anchorage with 30 feet of water 100 yards from shore. The beach is smooth and sandy, with no rocks.

Playa Río Negro.—The most important charcoal shipping point on the bay. Contains 6 houses and a large general store. The Río Negro has been converted into a canal and its mouth has been closed by means of a double lock. Water has to be brought from Playa La Caña in a water boat which is kept at Playa Río Negro. There are 14 flat-bottom barges drawing about 9 inches of water and which will each hold 20 men. About 200 yards from shore there is 30 feet of water, but it is not a good place to anchor as boats are exposed to the full force of storms coming up the bay from the sea. The road around the head of the bay runs through this place and goes on to Playa Entrada Cazones. It is a poor one, and at times it is necessary to go along the beach.

Playa Entrada Cazones.—At this point there is a house, but no fresh water. A very bad trail runs to San Lázaro via Cazones.

SPRINGS.

Along the bay there are two springs which have not been included in the list of springs in the Ciénagas Occidental and Oriental. They are as follows:

Patricio.—An opening in a cave through which the water bubbles up. It is excellent water, but has a slight sulphur taste.

Galleta.—This spring is an opening in the solid rock, 4 feet wide and 12 feet long. It is on high ground and contains excellent water.

CAMP SITES.

In the vicinity of the Bahía de Cochinos the insurgents established the following camps:

San Blas.—Established by Gen. Pancho Pérez and Col. Desiderio Mato after the Jocuma-Orbea trocha was built in 1897 and maintained until close of insurrection.

Júcaro Quemado.

La Ceiba.

Jequí.—A hospital was established at this place by the insurgents.

Santa Teresa.—Camp commanded by Capt. Agustín Rosario.

San Lázaro.—Hospital and headquarters camp for the district of Ensenada, which extended from Manadero to La Ceiba. Commanded by Maj. Eulogio Lobato, who also commanded the entire district.

Santo Tomás.—Camp commanded by Capt. Luciano Madruga.

Early in 1897 the Spaniards established a fort at Máquina, a second at Santa Teresa, and a third at Suplial. A force of 300 men occupied these forts. There was a Spanish cruiser stationed in the Bahía de Cochinos, and a small tug carrying rapid-fire guns was kept at Máquina as long as the Spanish stayed there. The insurgents attacked the Spanish in force at Santa Teresa shortly before the Spaniards left. Neither side gained any advantage. A large number of Spaniards were killed. The Spanish left the vicinity of the bay late in 1897.

TRAMWAYS.

There are several short narrow-gauge tramways along the coast, all of which are used either for bringing timber to the coast or for bringing charcoal to a shipping point. They are as follows:

Rosario.—Narrow-gauge railroad to be built here in winter of 1907–8; to have 10 flat cars and 1 engine; to be used in bringing logs to coast for shipment; to run to Punta Perdice and well back from Rosario.

Máquina.—Narrow-gauge (30-inch) tramway to Suplial on plantation; about 3 miles long; no engines; roadbed prepared as trail on which mule pulling car travels; rails weigh

39 pounds to the yard; 4 small flat cars, loose boards on top of frame. This line is used for bringing logs to the coast. In the interior they are pulled to the railroad at different points by oxen.

Playa La Caña.—Narrow-gauge tramway, same as Máquina-Suplial line; about a mile long; no mules used; 2 cars for bringing charcoal to shipping point.

Río Negro.—Narrow-gauge tramway, same as Máquina; 2 branches; one about a half mile long and the other about 1 mile long; 3 flat cars. No animals used. Line used for bringing charcoal to shipping point.

Playa Entrada Cazones.—Narrow-gauge tramway same as Máquina; about one-fourth mile long. Track built on wooden trestle, most of way over bad marsh, to charcoal burning plant. One flat car; no animals; used to bring charcoal to shipping point.

THE LAGUNA DEL TESORO.

The best trail for reaching this lake starts from the head of Cochinos Bay, therefore the lake should be described in connection with this bay.

Laguna del Tesoro drains the eastern portion of the swamp known as the Ciénaga Occidental and the western part of the swamp known as the Ciénaga Oriental. It is about 3½ miles long at its longest point and is variable as to width, the average being a little over 2 miles. There are a number of large "floating islands" and as these move from place to place with the wind it is difficult to secure any accurate idea of the coast line of the lake. It is also exceedingly difficult at some places to determine where the lake ends and where the ciénaga begins, as the swamp grass grows well out into the lake and the waters of the lake cover a large part of the ciénaga proper. In the middle of the lake there seems to be a large area which is very deep—in some places 40 feet of water was found and in one place 60 feet; the rest of the lake averages from about 2½ feet, near the shore, to 20 feet well out toward the center or deep part. Along the shores there is a great deal of mud, very soft and difficult to get through. Where the water is deeper away from the shores, and even close to the shore where the water is deep, the bottom is very hard.

The water from the lake flows off in two ways. First, by a general surface flow west and southwest in the direction of the rivers. Second, by means of several underground channels. These are in evidence at the Boca del Río Santa Teresa and at Caleta de Ventura, at both of which places there is a noticeable flow of cold swamp water to the surface. Especially is this noticeable in the case of the former, where the water comes up with great force and in great volume.

There are no trees in the immediate vicinity of Laguna del Tesoro except the mangle (mangrove) which grows in one or two places.

There are three trails leading to Laguna del Tesoro; one, the best, from Santa Teresa; another from Cayo Cristo, which is the old Salchicha trail across the ciénaga from the north; a third, from Cayo El Peso. There is a trail running around the lake which can be followed with difficulty. These trails, with the exception of the one from Santa Teresa, have been practically abandoned since the close of the insurrection in 1898. The trails from Cayo Cristo and Cayo El Peso are across the open ciénaga and are almost impassable. On the Santa Teresa trail there are three points which serve as resting places; they are Cayo La Flora, Cayo Diez y Nueve Palmas, and Cayo El Pájaro.

They divide the distance from Santa Teresa to the lake into three equal parts. From Cayo La Flora to the lake there is not much mud, the trail being along the Río Santa Teresa.

From Cayo La Flora to Cayo Diez y Nueve Palmas the trail is still in the bed of the river, but the bottom is soft and the mud is deep.

From Cayo Diez y Nueve Palmas to the woods, near Santa Teresa, there is more water and less mud. Throughout the entire trail a sharp watch must be kept for the biajaca holes, or "water caves." These are deep holes found all over the swamp.

There are five small rivers flowing into Laguna Tesoro and two flowing from it. The Río Faldicera flows into the lake from the open ciénaga to the northwest. The arroyo La Cubana flows into the lake from the open ciénaga to the north.

The Río Negro connects the Laguna Nuevo, a small lake to the northeast, with Laguna del Tesoro.

The Río Largo flows into the lake from the Ciénaga Oriental.

The Río Dos Hermanos flows into the lake from the south.

The rivers flowing from the lake are the Río Santa Teresa and the Río Maravilla; they combine one-fourth mile south of the lake to form the Río Santa Teresa.

None of these rivers are deep except the two flowing south from the lake. They are little more than a marked current in the swamp. The Santa Teresa and the Maravilla are deep close to the lake, but beyond this they join and the resulting stream is very shallow. The trail to Santa Teresa follows the course of this stream until it disappears in the open ciénaga. None of these streams would be recognized as rivers in the swamp unless looked for and the flow of surface water carefully watched.

'Just to the west of Laguna del Tesoro is Cayo la Caruja; to the northwest is Cayo Punta Asino; to the north is Cayo el Peso, and to the east Cayo la Gloria. All these cayos can be used as camp sites and were so used during the insurrection from time to time. On Cayo el Peso a permanent camp was established, and here refugees came when hard pressed by the Spaniards. The lake contains fairly good water and abounds in excellent fish (principally biajaca and manjuarí), ducks, eels, turtles, and crocodiles. From September 15, 1906, to March 1, 1907, over 12,000 crocodile skins were secured in and about the lake and shipped from points along the coast. During the dry season the crocodiles from the open ciénaga flock to Laguna del Tesoro.

There are two flat-bottom rowboats on the Santa Teresa-Tesoro trail; a very light one at a point where the woods end near Santa Teresa, and the other, a heavier one, at Cayo la Flora. These boats each hold 4 men comfortably. The light one is used in going over the trail. The party puts its supplies, etc., into the boat, and, keeping at each end and along the sides, drags and pushes the boat along over the grass and plants. The second boat is used in the open lake. This method of traveling on the trail makes it possible, by gripping the boat, to avoid going down into the "water caves."

METHOD OF INDEXING.

Whenever possible abbreviations have been used in the index. The system used is given below, together with examples of its application.

I. Abbreviations following a name and showing whether it is a province, judicial district, township, barrio, town, etc.:

Pr.	Province.
J. D.	Judicial district.
T.	Township.
b.	Barrio.
b-t	Barrio and town.
b-v	Barrio and village.
b-s	Barrio and sitio.
t.	Town.
v.	Village.
s.	Sitio.
s. m.	Sugar mill.

II. Abbreviations following a name and showing the province in which it is situated:

C.	Camagüey Province.
C. Z.	Ciénaga de Zapata.
H.	Havana Province.
M.	Matanzas Province.
O.	Oriente Province.
P. R.	Pinar del Río Province.
S. C.	Santa Clara Province.

III. Abbreviations commonly used:

desc.	Description.
ment.	Mentioned.
pop.	Population.

Examples.

Havana; J.D., H., list of townships.	See this page for a list of townships in the judicial district of Havana, province of Havana.
Havana; T., H., pop.	See this page for the population of the township of Havana, province of Havana.

Havana; T., H., list of barrios.....	See this page for a list of the barrios (with populations) in the township of Havana, province of Havana.
Havana; t., H., desc..............	See this page for a description of the town of Havana, province of Havana.
Biran; b-v., O., desc..............	See this page for a description of the barrio and village of Biran, province of Oriente.

In Spanish the letters B and V, C and S, and I and Y are frequently used interchangeably at the beginning of some words, as: Biran or Viran, Ceiba or Seiba, Itabo or Ytabo. In the text the more modern or pópular usage has been adopted for such of the words as have been noted, but as there are no doubt some words which may have escaped notice, a searcher should bear this in mind, and when looking up words beginning with any of these letters, search the index under the alternate letter when the word is not encountered under the first.

It must also be remembered that there are different barrios, settlements, etc., having the same names, and situated in the same province. Every effort has been made to index these places separately.

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